THE ARCHITECT & BUILDING NEWS

5 APRIL 1956 · VOL 209 · NO. 14 · ONE SHILLING WEEKLY

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- **SHOP AT NOTTINGHAM**
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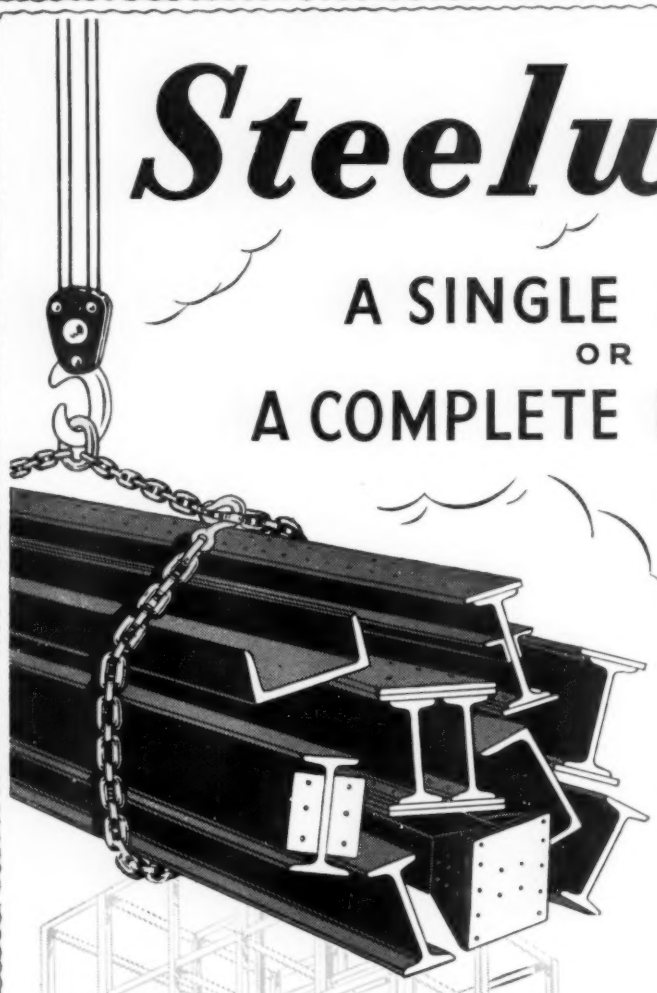

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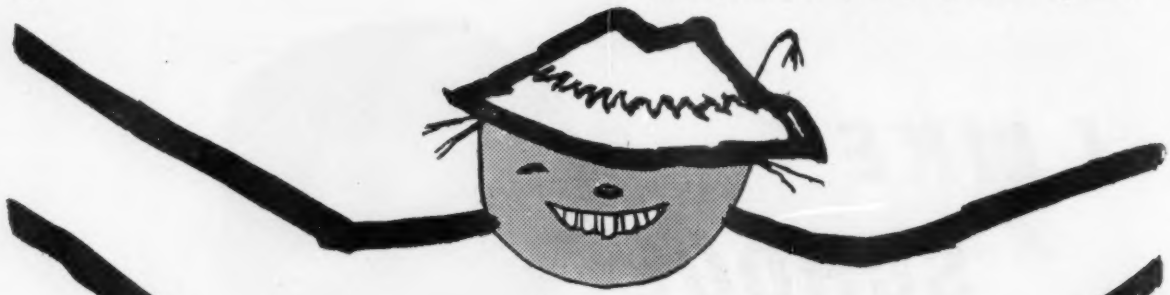

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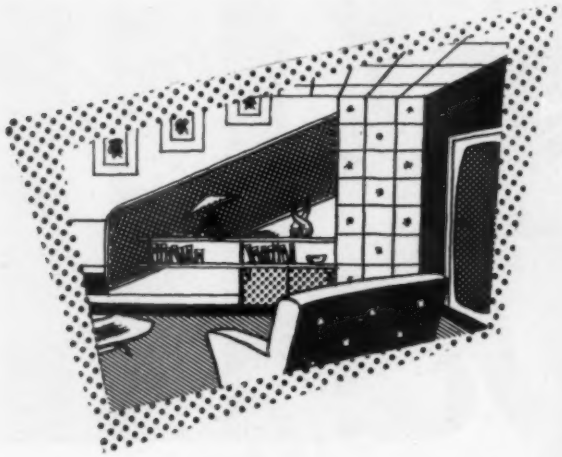

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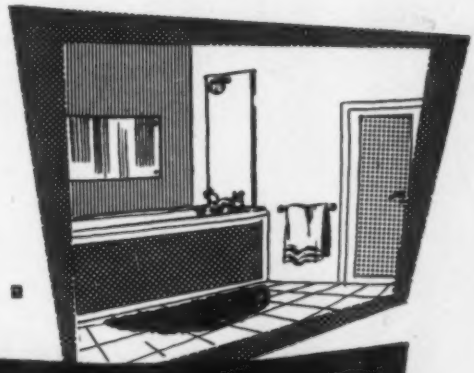

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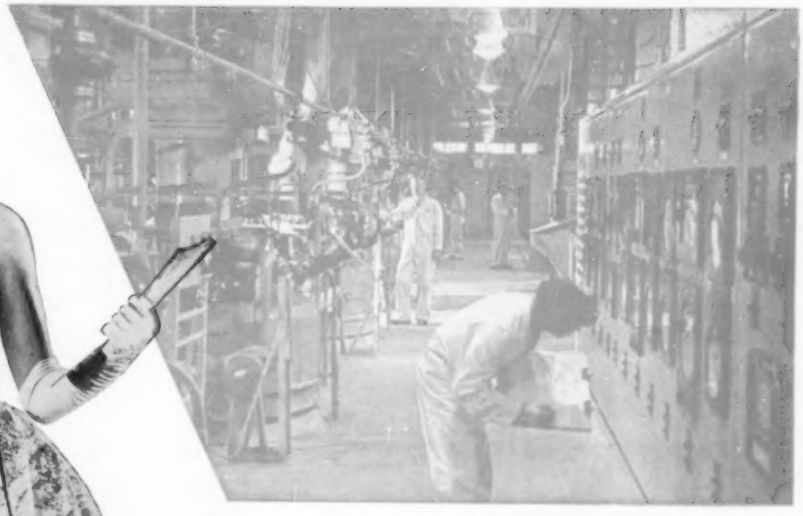

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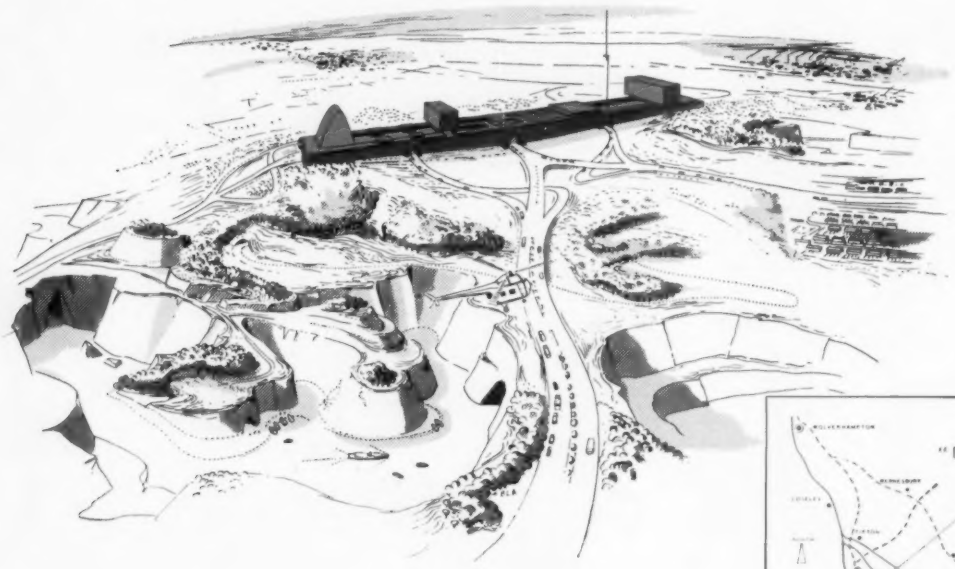
The Glass Age Development Committee

A committee of architects and engineers, convened by Pilkington Brothers Limited has made proposals for creating a large scale shopping centre in the Black Country area, and a preliminary survey of the project has already been published. The High Market Project has been designed under the direction of the Glass Age Development Committee, by Gordon and Eleanor Michell, A/A.R.I.B.A.



THE HIGH MARKET 2

Locality and Approach

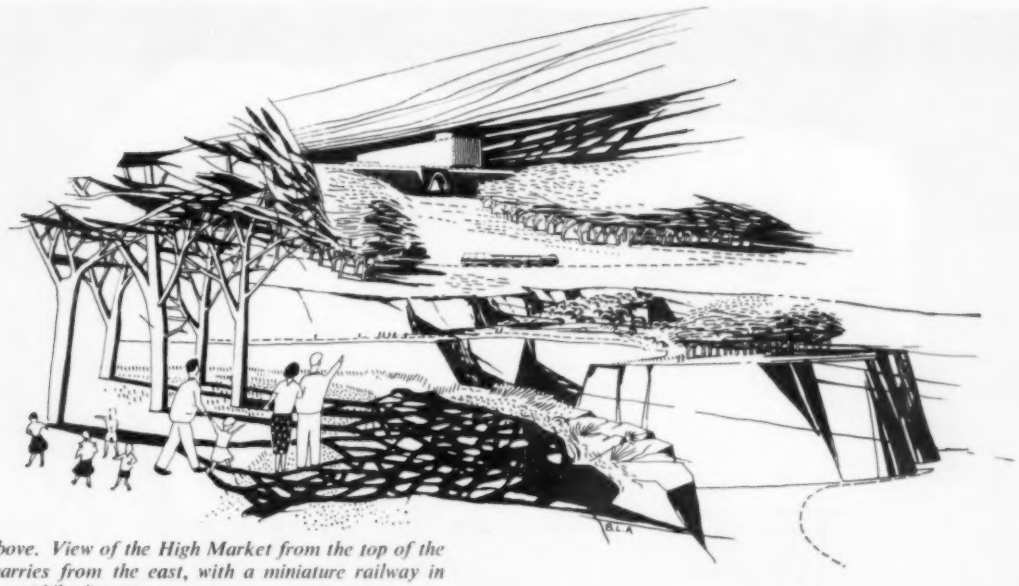
The High Market is intended to supplement existing shopping facilities for the populations of Birmingham, Wolverhampton, West Bromwich, Dudley, Walsall, Smethwick, Oldbury and the adjacent areas. It is sited on the high ground formed by Turner's Hill and Darby's Hill, and would be visible to the whole of the surrounding country.

The bird's eye view of the area given above shows the drop in level between the two hill tops, which enables roads to be constructed on a natural ground level, to the two parking levels of High Market. These enlarged and modernised approach roads climb the hill between existing granite quarries. As these quarries become worked out they would be flooded and the edges planted. This area would be accessible by car, with car parks concealed in the lower quarries, and by a miniature railway, which would start from an underground station below the central car park entrance.

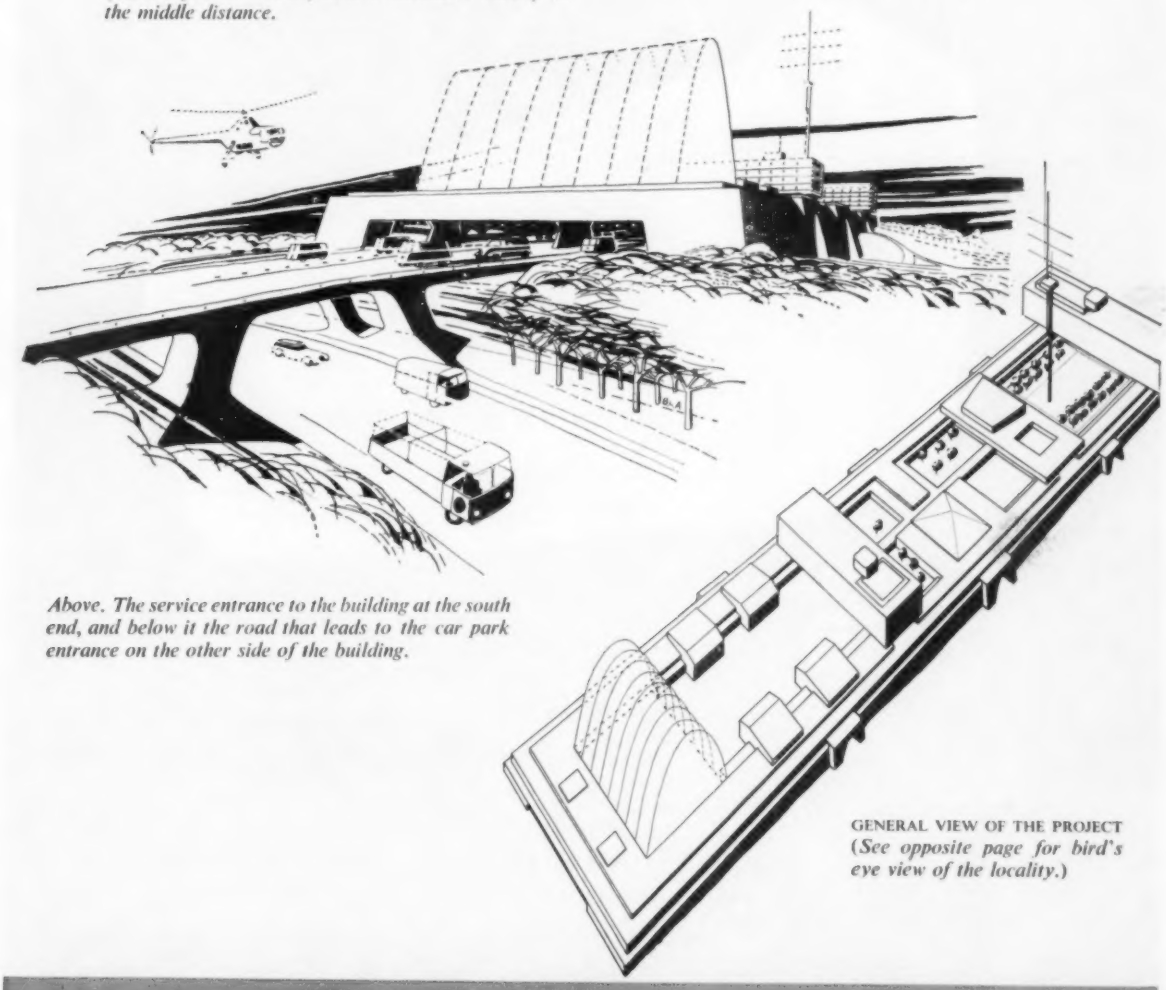
The existing golf course on the west side of the building would be retained and the rest of the plateau laid out for football, cricket and other games. Under this plateau the Netherton underground canal runs straight for 1¾ miles. This could be connected to the flooded quarries thus linking them with the whole canal system to the north of the building. Water for the boating lakes would be filtered — and kept fresh and moving by a pumping station.

Some details and a general view of the project are given on the opposite page.

PILKINGTON BROTHERS



Above. View of the High Market from the top of the quarries from the east, with a miniature railway in the middle distance.



Above. The service entrance to the building at the south end, and below it the road that leads to the car park entrance on the other side of the building.

GENERAL VIEW OF THE PROJECT
(See opposite page for bird's eye view of the locality.)

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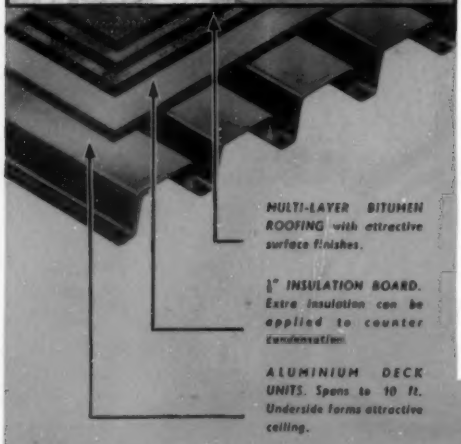
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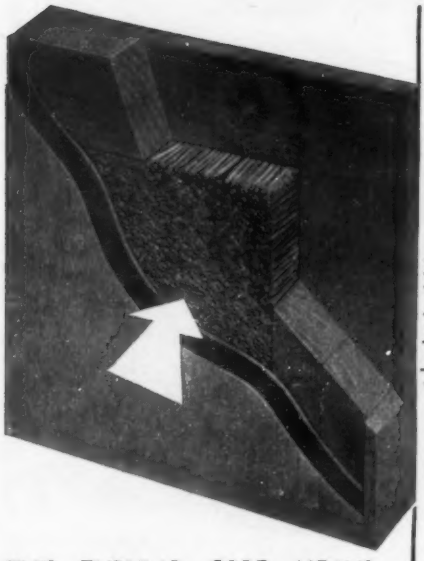

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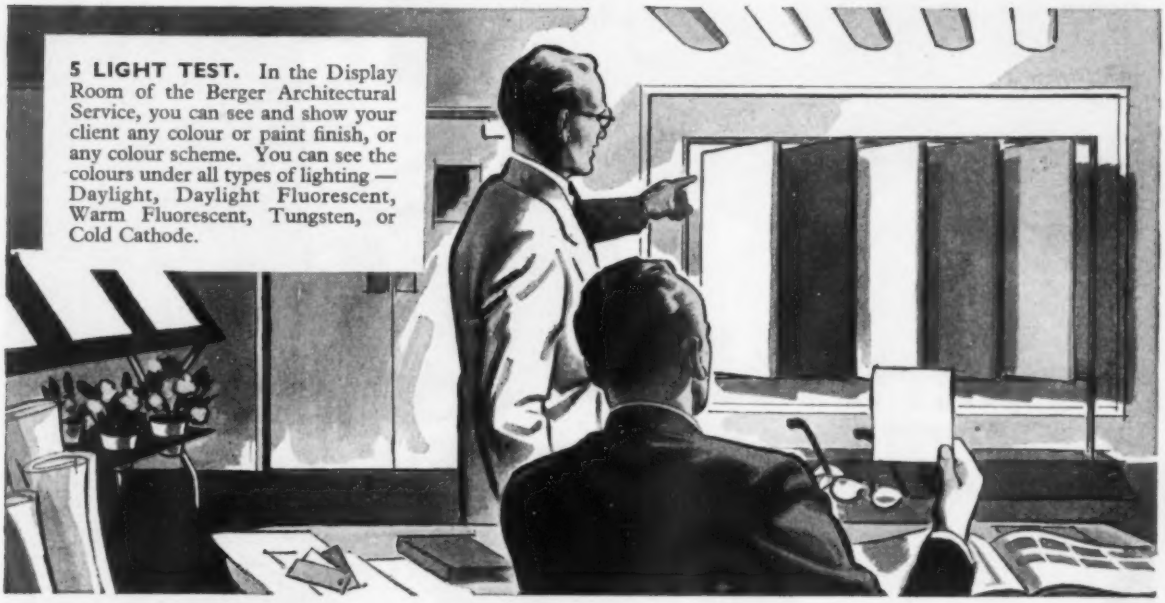
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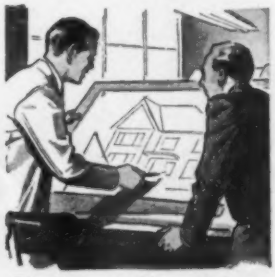

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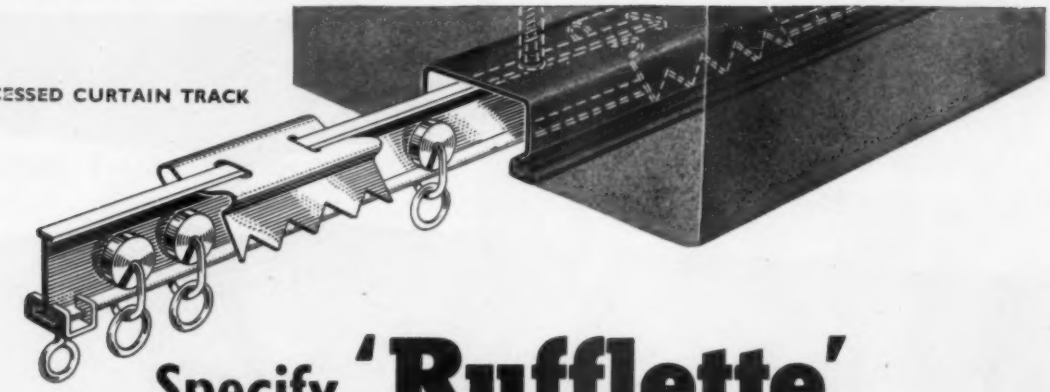

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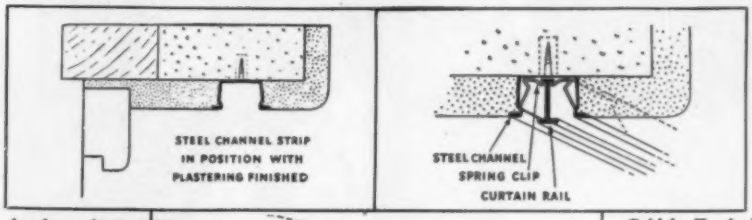
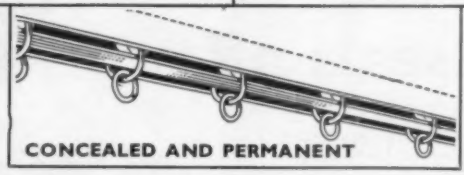


"Rufflette" Brand Tracks have been installed by many local authorities including Ilford, Wandsworth, Lewisham, Willesden, Finchley, Wood Green, Poplar, Wimbledon, Greenwich, Stoke Newington, Islington, Holborn, Leyton & West Ham Borough Councils. Also London, Bucks, Surrey, Middlesex & Essex County Councils.



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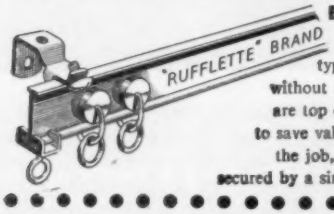

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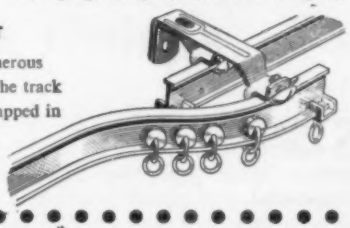
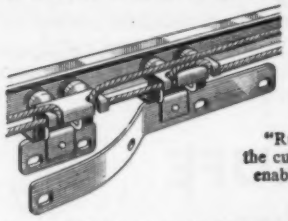
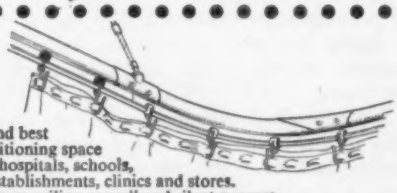




CORD CONTROL

On straight track, curtains can be effortlessly opened and closed with this "Rufflette" Cord Control. Note the curved travelling section which enables curtains to be overlapped without cutting the track.

CUBICLE TRACK



The simplest and best method of partitioning space by curtains, in hospitals, schools, hairdressing establishments, clinics and stores. Suspension is from ceiling or wall and silent runners make the operation of curtains almost inaudible.

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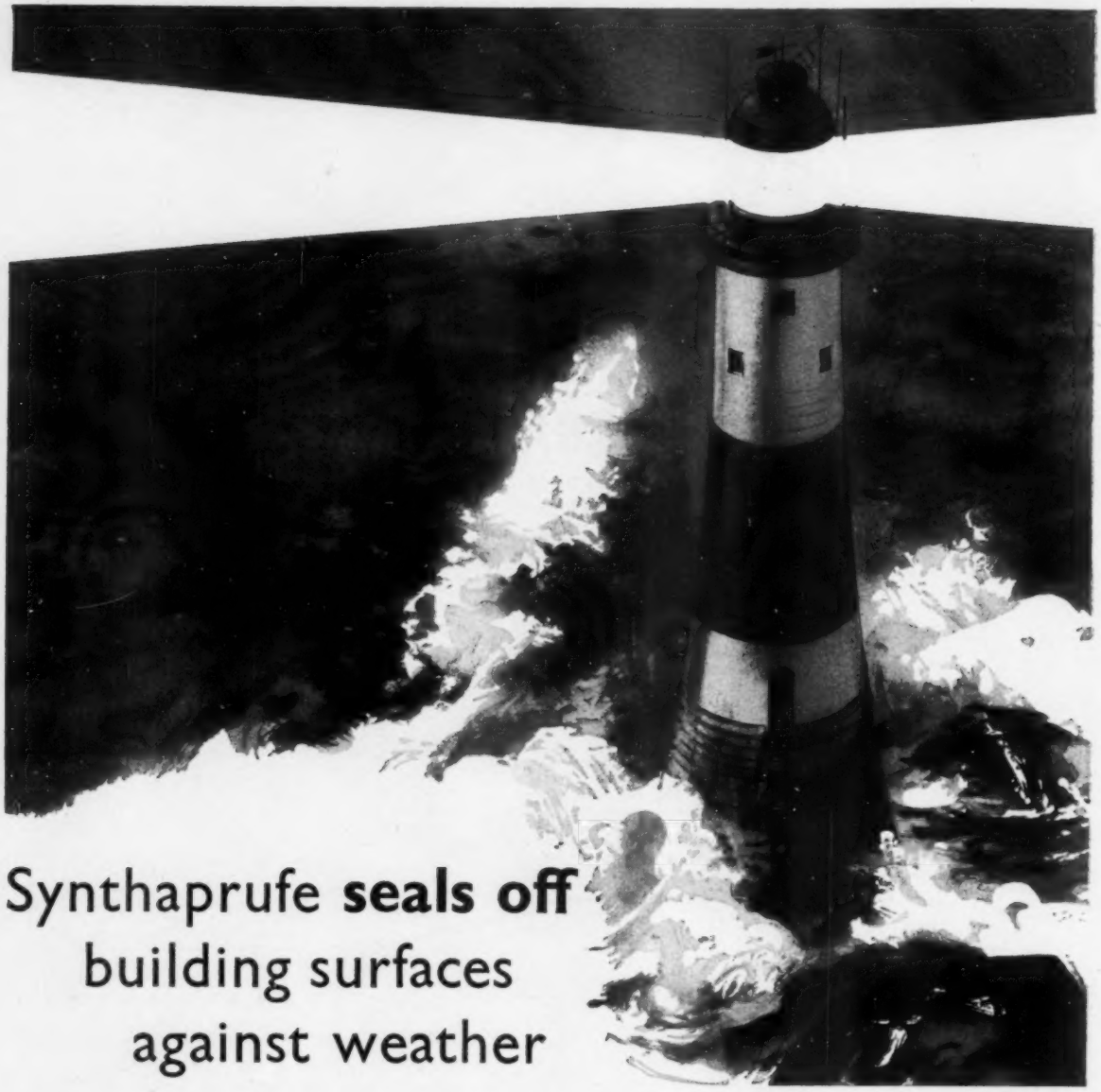

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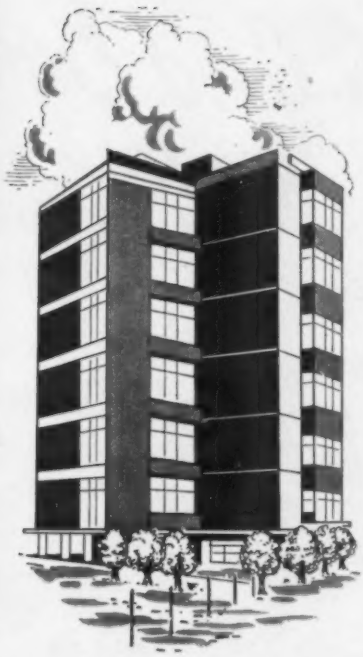
with falling costs...



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A non-technical description of " Pyrotenax " is given in our booklet " Current Carrying ". For the technical man " Technical Data " is available — write for your copy.

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GD26.

A Good Bar makes a place

The County Hotel Carlisle

By courtesy of The County Hotel, and Wine Co. Ltd. Architects: Messrs. Johnston & Wright

This contract is interesting in that Gaskell & Chambers undertook everything including fittings, furniture, furnishings and decorations, etc. The counter is in weathered Sycamore and Sapele Mahogany with heat resisting tops. A raised floor is fitted to the servery and the plinthe to the counter is covered with linoleum. The lower portion of the backfitting contains the normal storage shelves and the upper portion has a plain mirrored back and plate glass display shelves. A suspended false ceiling is installed over the fittings with a glazed lay light in the centre. These give provision for ventilation and lighting. The end of the servery is fitted with an open metal grille on which growing plants form decoration. The sprung seating, upholstered with a yellow and black fabric, is divided into individual units with piping. The built-in tables are in weathered Sycamore with buff coloured heat resisting tops. The tables are in Elm veneer, and the metal framed counter stools have Mahogany seats. The patterned tiles of the fireplace are in white, grey and yellow and the carpet is moss green. Whether you need a complete plan or your own design carried out

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Vol. 209 No. 14

THE ARCHITECT & BUILDING NEWS

April 5, 1956

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BUILDERS' BENEVOLENT INSTITUTION

ON Tuesday 10th April, with their President, Mr. Guy G. Lawrence and their guest of honour, Mr. Nigel Hannen, President of the National Federation of Building Trades Employers, a gathering of people will sit down to dinner at the Dorchester with the gratifying thought that they are helping others, whilst enjoying an opportunity to dine out.

The occasion will be the Annual Dinner of the Builders' Benevolent Institution, whose funds are swelled each year by the surplus from the sale of tickets for this annual festivity.

The Builders' Benevolent Institution is a charity which exists to help, by means of pensions and grants and gifts in kind, old people previously connected with the building industry.

As a general rule, a person admitted for benefit has to be over 55 years old, a Master Builder (a term which is deemed to include Masters in sub-trades such as Bricklayers, Plasterers and so on) for at least ten years, and one whose income does not exceed £150 per annum. A wife, widow, son or daughter of such a Master Builder may also receive benefit; and the Committee of Management have discretionary powers to grant benefit to any applicant when satisfied that special circumstances exist to support his or her case. Furthermore, the committee may grant temporary financial relief to any person connected with the building industry who has rendered service to the Institution but who would not otherwise qualify for benefit under the rules.

In their 108th Annual Report recently made public, the Committee of Management, in order to illustrate the work of the Institution, give examples of typical cases; they are heart rending to read. The report mentions that the Institution's pensioners are visited at intervals by a welfare officer who reports upon their circumstances. From these reports the committee are able to make gifts—of coal, clothing, food, etc., as occasion demands—to supplement the monetary grants, which are made in any case so as not to affect the applicant's entitlement to relief from the National Assistance Board. The committee are thus assured that each pensioner is adequately provided for.

Reporting on the Institution's activities during 1955, the committee mention that as a result of their work there was an increase in the number of applications for relief during the year, resulting in further grants of pensions or temporary relief being made and involving the committee in an overall increase in the number of pensioners now in receipt of benefit.

In these days of credit squeeze, anything may happen to any one. It may not be a bad kind of insurance policy to work on the principle—do unto others as you would be done by.

Be that as it may, there is a very good reason for giving support to the Institution. From the annual accounts published in the committee's report, it is apparent that donations last year fell short of the average for the past few years.

Some supporters may feel that the capital assets of the Institution are sufficient to enable the Committee of Management to meet its commitments. If extension of the Institution's good work is to become more widespread, it must have more funds; and a substantial increase in income will be necessary.

D

EVENTS AND COMMENTS

THE D.I.A. AS CRITICS

The London branch of the Design and Industries Association spent an interesting, and hard-working, evening at Heal's recently. The management invited them, and their friends, to take a glass of sherry and then to tour the store in parties writing their comments and suggestions on a form provided. This enterprising idea kept the directors and sales staff hard at work until about 8 p.m. Heal's remains the only thing of its kind and the standard of merchandise is very high. I sat in many comfortable chairs and imagined myself writing this at several scrumptious desks. The Continental department contains some interesting things too, but I imagine few people will be led astray by a new device from I think Denmark, first seen at H55 and purporting to be chair, chaise-longue or table or part of each. It seemed to me to do no job properly.

THE ENGLISHMAN'S HOME AND ITV

Twenty minutes is hardly long enough to argue about any single subject and when about five different subjects are introduced the result is not very edifying. The P.R.A., Lady Tweedsmuir, Gontran Goulden and Leo de Syllas, with Leslie Mitchell, discussed the "Englishman's Home" for Associated Rediffusion last week. It was quite amusing but hardly a contribution to thought on the subject. Hardy friends such as frost precautions, the height of sinks, parlours and cooking smells all came up for dusting. The P.R.A. was more subdued than usual and although baited by the other two architects did not rise except to declare at one stage that everything should be subordinated to the elevation. Once again though profoundly disagreeing with the P.R.A. on almost every point I could not but admire his enthusiasm and vigour in his 76th year.

I understand that the promoters are having great difficulty in retaining programmes containing even this small amount of "culture", the demand is all for bands and girls, and that brings me to my next report.

OXFORD STUDENTS (ARCH.) CUT CAPERS

The tenth (why did I miss the other nine?) annual ball of the Oxford Architectural Students Association was held at the Randolph Hotel recently. The band was Humphrey Lyttelton's. I had often heard of but never listened to the weekly goings-on at 100 Oxford Street, London, but had been led to believe that these musicians were something out of the ordinary. They're more than that, they're terrific. Each is tremendous in his own right and Mr. Lyttelton excels, as they say, on the trumpet.

A.A. students should feel their noses right out of joint about this affair for the whole dance was a howling success and somehow the architectural girls of Oxford seemed to me even more beautiful than those of Bedford Square.

The Queen and the Duke of Edinburgh talking to Basil Spence in front of the model of his new Coventy Cathedral before Her Majesty laid the foundation stone last week.

A.A. DRAMATICS

I believe that there are enough new plays about to entitle the classics to be left undisturbed. The fact that someone has made a new translation from the Russian leaves me cold particularly when it includes many 1956 colloquialisms in a play first produced in 1900. In short, I do not approve of Chekhov's "The Three Sisters" new style.

The A.A. Theatre Group is still a good body of amateurs but I thought that they failed completely to put across the tenseness, frustration and hopelessness of this period drama. With the exception of the performances of Patricia Bullivant, for once cast properly, as Masha, and Janice Elliott as Olga, I found no drama in the play at all. John Cain's Vestinin was a hopelessly weak character who mouthed words he did not appear to understand and I felt that the Baron thoroughly deserved to be shot, although I knew that I should have been very sorry for a sympathetic character. On the whole the small parts were very well done and I particularly enjoyed Richard Penton as Soliony. Leonard Manasseh made the maximum use of five or

six lines and his appearance electrified the audience. The entr'acte music composed and conducted, with a hammer, by Stephen Rhys also electrified the audience who, although they evidently knew that it was intended seriously, were not quite, for the most part, able to catch its true significance.

The setting, a formal interpretation of the usual Victorian interior, was well done and the production was generally speaking up to this group's high standard.

ARCHITECT WANTED

Elsewhere you will find an advertisement for the post of Chief Architect to the Cumbernauld Development Corporation. I understand that it is intended to profit from the mistakes of other Development Corporations by building at Cumbernauld to higher densities with the object of setting a new standard in urban development of a close knit type.

Cumbernauld will, it is hoped, develop quickly and take 50,000 people from Glasgow within the next fourteen years. The town will be a balanced community with industrial and commercial facilities.

VANDALS AT WORK

As usual we have all been caught on the wrong foot. Perhaps you, as I, watched the march of concrete lamp standards up Knightsbridge to Hyde Park Corner, where it halted some months ago. A vigorous campaign led by Margaret Casson drew, I thought, assurances from the Westminster Council that Piccadilly would be spared. Now while we all sit back the march continues up Piccadilly. Not only are the concrete standards a very poor exchange for the existing ones but the light they give is, to my mind, quite unnecessarily bright and garish.

CANNON STREET STATION

Reconstruction is all the rage at Cannon Street, and those who have been wetted because of the absence of glass in the roof ever since the war will be glad to be covered again. Unfortunately the large glazed roof is to be pulled down and so are the twin pepper pots at the river end. The result will be very odd. From the look of the steelwork going up the new station will not be very beautiful.

More important perhaps is the threat to some of our early Victorian stations in East Anglia. Needham Market is a collector's piece. These stations are not scheduled for preservation and the county planning officer thinks they should be. On the whole the architects' department of British Railways can be trusted with this type of ancient monument but unfortunately they do not have the last say.

ST. PAUL'S

It is sad but hardly surprising that opinion is so sharply divided on the merits of Sir William Holford's scheme for the precincts of St. Paul's. Brought to its simplest terms there are three schools of thought. (1) The architecturally ignorant who do not understand subtlety, contrast and pedestrian areas; and who wish to put the cathedral in a pompous gilded frame because that is what they do with their pictures, if they have any. (2) The P.R.A. who wants "disciplined architecture" and we all know what that means, and (3) the main body of architects, planners and people of discernment.

The best article on the plan so far appeared in *The Observer* and was written by R. Furneaux Jordan. The fiercest attack was in a leader in the *Daily Telegraph*. This leader differed strongly from the opinions of the paper's architectural correspondent John Betjeman.

The City Corporation has held on its unimaginative course but one bright spot remains; the will to proceed. In this it differs from the P.R.A. who appears to want delay at any price.

Jordan in his article hinted darkly at a lay power behind the scenes and he pointed out that Holford "was not prepared to play Haussmann to somebody else's Napoleon III". Could this somebody else be the Minister of Housing and Local Government?

If you have still not seen the model and drawings they are at the Building Centre until to-morrow evening.

Stop Press. I have just seen Sir William Holford's letter to *The Times* written in Rome. He is in fighting form. No doubt the Italian air is doing him good. He warns of the dangers of playing Mussolini tricks with St. Paul's, calling it "mock majesty", and describes the alterations to the setting of St. Peter's thus "There are no new ideas in this layout, no creativeness of style or invention, only a pale offering of old ideas, rehashed but not revived."

ABNER

Correspondence

Hotel Leofric

Dear Sir,

I have recently returned from a five months business trip abroad and I face the pleasant task of catching up on my several magazines that have accumulated during my absence.

In the *Architect and Building News* for January 19th, 1956, I find an illustration of the new Hotel Leofric with the accompanying caption "Have you stayed here?" I should like to answer your question—Yes.

My practice for the past many years has been devoted to hotel planning. My recent visit to Britain was my tenth visit abroad. I have in the course of my travels stayed for brief periods in approximately 150 of the world's leading hotels.

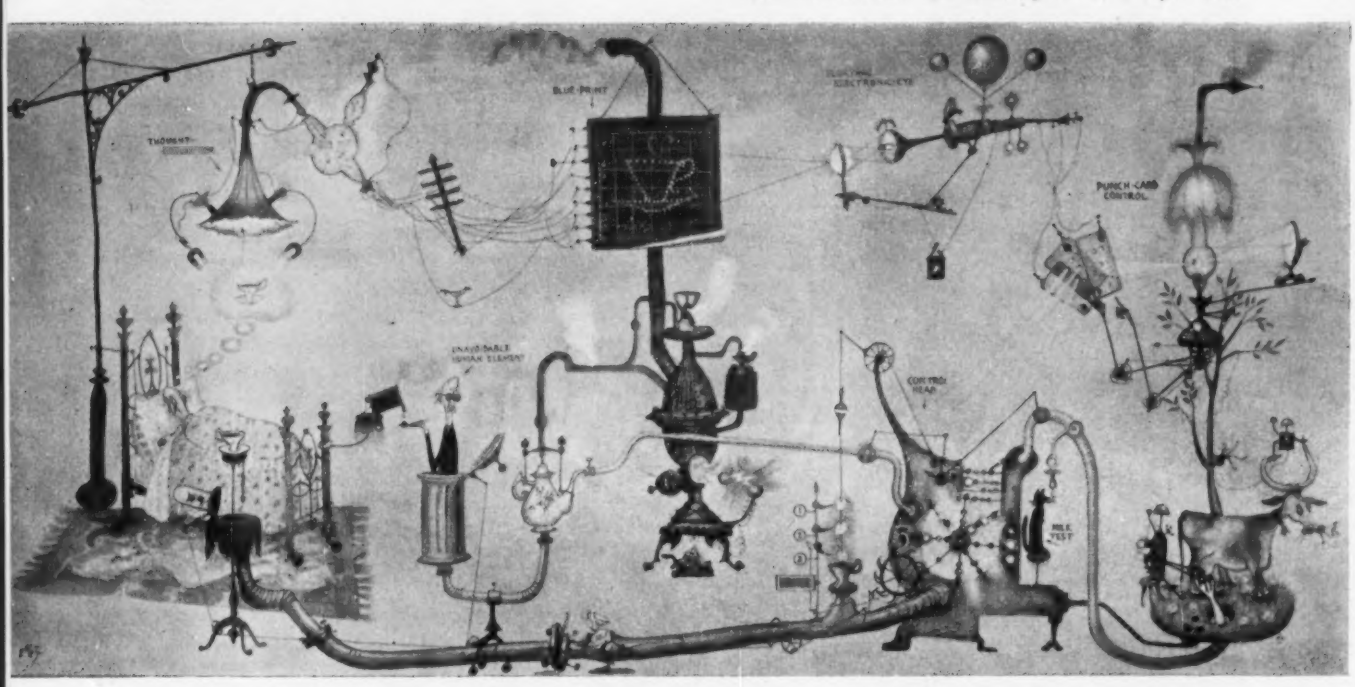
I have visited the capitals of most of the European and the Scandinavian countries, Great Britain, Canada, North and South America, and South Africa, so that I feel I am competent to express an opinion on the Leofric.

It compares more than favourably with the best in the world and Britain should be proud of the firm of architects responsible for its design and to the brewery whose operation is supplying such a high standard of service.

Yours very truly,

LESLIE M. PERROTT

Architect, Melbourne, Australia.



The miracle of automation, cosily applied to that most critical production, early morning tea, as portrayed by Emett on the backcloth at the recent 5th Electrical Engineers Exhibition at Earls Court.

NEWS

Financial Position of the R.I.B.A.

The Council have carried out a review of the financial position and in this connection had before them detailed estimates of income and expenditure for the year 1956 and an outline estimate for the year 1957. It was clear that through the substantial increase in the cost of all services (e.g., postage and printing charges on the Journal and Kalendar alone will increase in cost by £8,000 per year), the Institute's revenue will fall behind expenditure in 1956 without making provision for any of the increased activities on behalf of members which have already been approved by the Council or which are forecast in response to the desire expressed by the general body of members at the Annual General Meeting in 1955. It was agreed that some savings and additions to revenue other than from subscriptions would be effected in 1957 but it was clear that the total of these would not suffice to balance the accounts in either of the two years under consideration. The Council then considered the rates of membership subscription in relation both to the fall in the value of money since the war and to the rates currently in force for other comparable institutions. In this connection they also had in mind the desire expressed by the Allied Societies' Conference for an increase in the financial assistance made to Allied Societies, especially to those of smaller size and not based on urban areas. It was clear that no such assistance could be given without a comparable increase in revenue.

Having regard to all the circumstances it was agreed that notice should be given that with effect from the 1st January, 1957, membership subscriptions would be increased so as to stand at the following rates:—

(a) *In the United Kingdom and Republic of Ireland*:
Fellows £10 10s.; Associates £6 6s.; Licentiates £6 6s.; Students' Annual Contribution £2 2s.

(b) *R.I.B.A. Members in the Trans-Oceanic Dominions who are also members of Allied Societies in those Dominions*:
Fellows £6 6s.; Associates £4 14s. 6d.; Licentiates £4 14s. 6d.

(c) *Members resident abroad outside the area covered by the Allied Societies*:
Fellows £6 6s.; Associates £4 14s. 6d.; Licentiates £4 14s. 6d.

(d) *Students R.I.B.A. resident overseas*:
Students elected after 1st January, 1953 £2 2s.; Students elected before 1st January, 1953 — No contribution for the first 5 years, thereafter £2 2s.

(e) *Retired Members and Subscribers*:
Retired Members £1 1s.; Subscribers £1 1s. (No change)

These rates are calculated to restore the income and expenditure account to balance by the end of 1957.

The Council also felt that it would be desirable to budget for reasonable surpluses of income over expenditure in order to finance the completion of the R.I.B.A. building as quickly as possible. The re-building of No. 68 Portland Place, although providing for more convenient planning, will do very little to increase the floor area over that now available and the building of the upper storeys of No. 66 is urgently required to provide the necessary accommodation for both the existing staff and the new staff whose appointment has recently been approved by the Council.

If the necessary financial provision is not forthcoming from the margin of ordinary income, the Institute would be faced with the alternatives of not completing the building and accordingly having to rent additional accommodation outside at considerable expense, or completing the building and making provision by raising a mortgage to pay for the operation, which would involve the payment of high interest charges.

Symposium on Office Buildings

The Symposium on Office Buildings takes place at the Royal Institute of British Architects, 66 Portland Place, W.1, on April 12th at 2.30 p.m. and 6.30 p.m.

Professor Sir William Holford, M.A., P.P.T.P.I., F.R.I.B.A., will take the chair and present the first paper. There will be a small exhibition to illustrate the theme of the Symposium.

Tickets price £1 (which includes a full report of the proceedings) can still be obtained from the Secretary, R.I.B.A.

The Export Group for the Constructional Industries — "All-In Tenders" for Work Overseas

Approval has been given to the following Memorandum of Agreement between the Royal Institute and the Export Group for the Constructional Industries for architectural work in connection with "all-in tenders" for work overseas. The term "all-in tender" is defined as a comprehensive offer for design, specification and construction, including, if mutually agreed, supervision. The application of the Agreement is for the present to be limited to foreign countries and to India and Pakistan.

(a) The normal professional relationship between Architects, Clients and Contractors is to be preferred and will continue except where prospective Clients require an "all-in tender".

(b) Normally the members of the Export Group will select their own Architects but, in the event of Contractors requiring nominations for the purposes of this Agreement, application should be made to the President of the Royal Institute who will make such nominations.

(c) Architects are prepared to do such work for Contractors as will be necessary to enable the Contractors to put in an "all-in tender". The services provided by the Architect and the fee for these services will fall within, and be regulated by the provisions of Clause B.3 (Partial Services) (i) and (ii) of the R.I.B.A. Conditions of Engagement and Scale of Professional Charges.

(d) The initial agreement between the parties in each case will provide for the retention of the Architect's further services as may be mutually agreed.

(e) There would be full consultation and collaboration between the Architect and the Contractor in the preparation of the design. The Architect will undertake as far as is reasonable to prepare his design to suit the particular requirements of the team engaged upon the project, always provided that in his opinion the design is appropriate.

(f) The "all-in tender" to the Client and the provision of finance will be made by the Contractor.

Fixed Price Tenders

The Council of the L.M.B.A. has decided to recommend its members to omit the materials fluctuation clause for all work up to £5,000 if it is expected to be completed within six months of the date of tender. This decision is wider in its scope than the similar decision by the National Federation last month.

In receiving that decision, the L.M.B.A. Council noted that it applied only to Government work under Form CCC/Wks/1. The Council felt that a stronger lead could with advantage be given in London, and accordingly agreed to recommend that the £5,000 rule should apply to all building work undertaken by London contractors.

Announcement

The partnership between Mr. John Lacey and Mr. C. F. Timothy has been dissolved by mutual consent. Mr. C. F. Timothy will continue to practise at No. 1, Gower Street, W.C.1. Langham 5161.

A new building for Edger Investment Co., now under construction on the old Tattersalls site at Knightsbridge Green, London. The building's content is 3 million cubic feet. Architects: Stone, Toms & Partners. General contractors: Sir Robert McAlpine & Sons Ltd.

R.I.B.A. Special Meeting

A special General Meeting of the Royal Institute of British Architects to be held on Tuesday the 17th April, 1956, at 6 p.m. will consider the Council's recommendation for the revision of Bye-law 43. The purpose of the revision is to enable the Council to invest a proportion of both ordinary and trust funds in securities other than those customarily permitted by the High Court under the general heading of trustee securities. The object of this revision is to make possible some offset against the declining capital value of fixed interest securities by holding a proportion of equities. It is proposed that the whole of the existing Bye-law 43 be deleted and a new text substituted.

Standards Department: Change of Title

The Board of Trade announce that with effect from April 3, 1956, their Standards Department will revert to its former title of "Standard Weights and Measures Department".

The Standard Weights and Measures Department is responsible for the central administration of the Weights and Measures Acts and Regulations; and the Board consider the change of title desirable to prevent confusion between the functions of that Department and those of the British Standards Institution.

COMING EVENTS

Royal Institute of British Architects

April 9 at 6 p.m. Library Group Meeting. Miss Ida Darlington, M.A., F.L.A., will introduce an evening on the Records of the Metropolitan Buildings Office. At 66 Portland Place, W.1.

April 10 at 6 p.m. Presentation of the Royal Gold Medal to Dr. Walter Gropius.

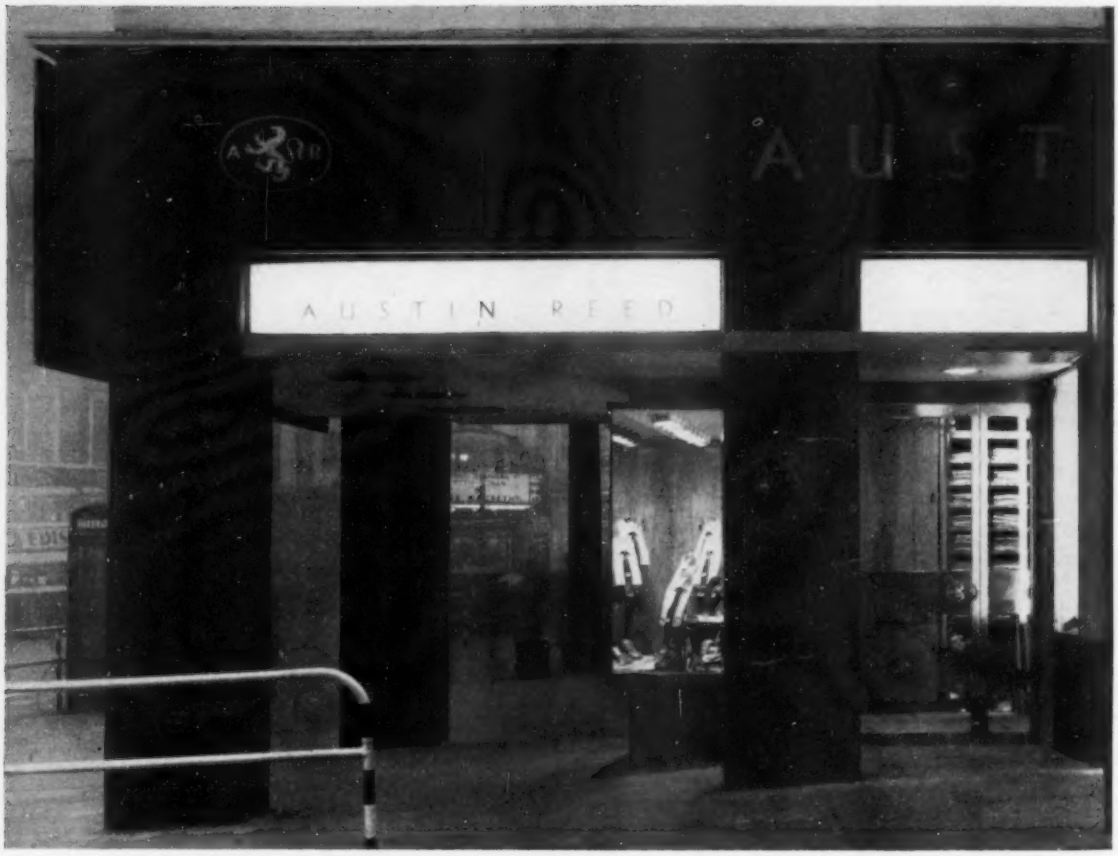
The Royal Institution of Chartered Surveyors

April 9 at 5.30 p.m. Ordinary General Meeting. Address on "Rating—The Past, The Present and The Future," by F. G. Fleury, O.B.E., F.R.I.C.S., at 12 Great George Street, Westminster, S.W.1.

April 14 at 11 a.m. General Meeting of mining surveyor members of The Royal Institution of Chartered Surveyors. The meeting will be held in the Mining Department of University College, Cardiff. Paper on "The Evolution of the Law of Support," by Professor John Sinclair, M.Eng., Ph.D., Barrister-at-Law. An exhibition of modern surveying instruments has also been arranged by Messrs. Cooke, Troughton and Simms and Messrs. Hilger and Watts.

The Housing Centre Trust

April 10 at 6 p.m. "The Home and Social Status," by Dennis Chapman, Department of Social Science, The University of Liverpool, at 13 Suffolk Street, S.W.1.



SHOP AT NOTTINGHAM for Austin Reed Ltd.

architects: WESTWOOD, SONS & HARRISON

partner-in-charge: NORMAN WESTWOOD, F.R.I.B.A.

assistant architects: PETER WATSON, A.R.I.B.A., and JAN PIET, Dip.Arch.

THESE premises occupy a very important corner site overlooking the Market Square. Owing to the War and to licensing restrictions, no improvements had been carried out for many years.

The clients required a new shop front, the 2nd floor (not previously used as a showroom) the first and ground floors completely refixtured. The 3rd floor (previously disused) converted into a cash office, canteen, Manager's office and stock room, etc. The basement was to remain a stock room.

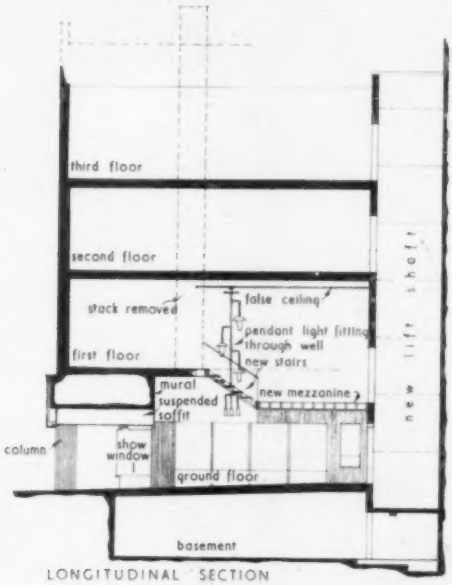
In order to use the 2nd floor, it was necessary to install a passenger lift which in turn involved the construction of a completely new staircase within a fire resisting glazed screen. The showcase window at the bottom of the stair had to be made into an emergency escape direct to the street. As the ground floor is very small, it was thought desirable to form a well in the first floor in order to link the two floors together visibly. At the same time, the rear portion of the first floor was lowered 4ft, thus making a small well more effective and the whole spacial volume more interesting.

The shop originally had a Victorian Gothic facade. In 1933 it was covered with rendering on expanded metal and given a "Moderne" look. The depth of the fascia and spacing of windows, etc., in the new front was very much governed by the original structure behind. An added complication was the steep rise of the side street.

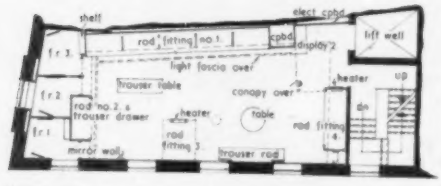
In order to keep the shop open during the alterations, a very careful programme of work had to be

Continued on p. 335

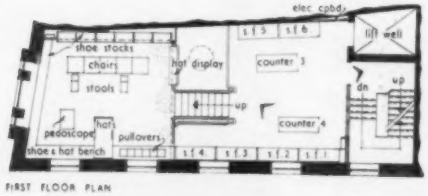
View of entrance. Materials: Fascia mahogany veneered ply resin bonded, edged with bronze, letters brass faced with black edges. The two main free standing columns are faced with precast black terrazzo units. Free standing column in front of entrance in Rosso Levanto marble. Window sashes satin stainless steel. Door and side light satin chromium plate. The illuminated panels are white ply glass with the name engraved and filled with black enamel.



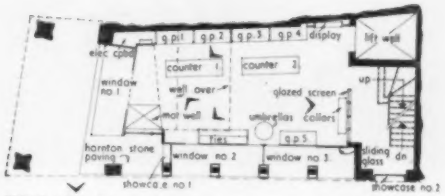
LONGITUDINAL SECTION



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

Scale: 1 in = 40 ft

A photograph (taken about 1933) of the premises as they were before alterations were carried out. The projecting fascia was constructed of rendering on expanded metal and behind it was the original Victorian Gothic facade.

General view after the alterations. The end showcase window had to be made to open outwards as an emergency escape from the new staircase. At night the whole of the upper windows are illuminated at cill level with sodium lights giving an arresting effect.

A view taken from the staircase, looking through the glazed screen, showing the two level first floor with a glimpse of the ground floor behind. The large cluster electric light fitting was specially designed by the Architects to draw the customer's eye upwards as he enters to the first floor. The ceiling is painted a saxe blue and the walls are white.

View looking towards the entrance on the ground floor. The wall above the door has been completely covered with a photo mural taken from an old print of Nottingham. The fittings are generally in mahogany and the panelling in Wych elm.

Shop at Nottingham

Continued from p. 332

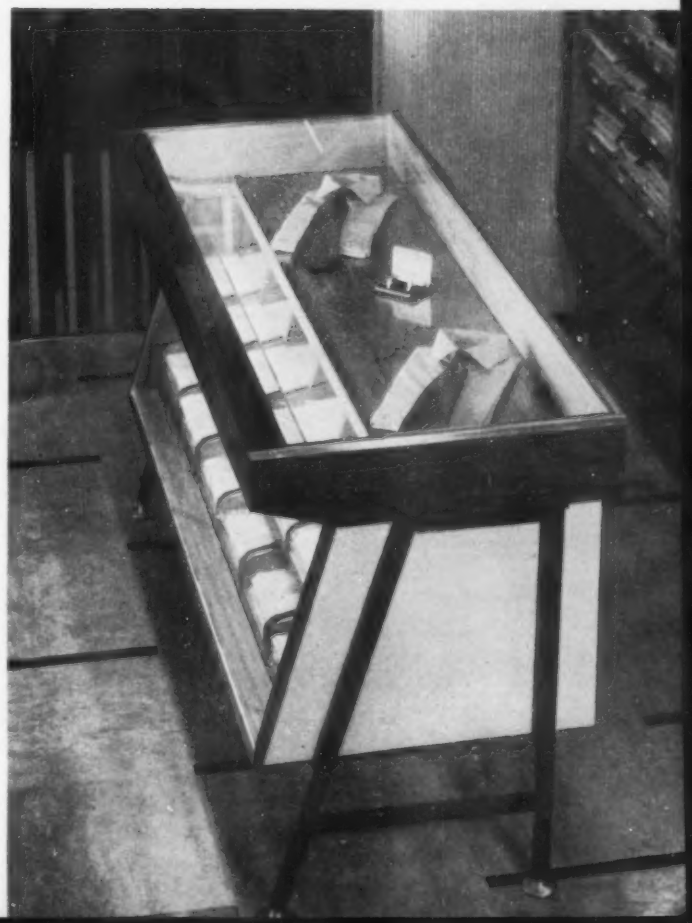
adhered to. This was briefly as follows:—

(1) Clearance of partitions and fireplaces, etc. on 2nd and 3rd floors and generally making good walls and floors.
(2) New encasing walls for lift commenced in basement (carried through ground floor over Bank holiday week). New staircase from basement to top of building commenced.
(3) Portion of first floor lowered and existing fittings put back as a temporary measure (Bank holiday week).
(4) Shopfitters completed 2nd floor and floor opened to public.
(5) 1st floor given up and refixtured, then opened to public.
(6) Ground floor given up and public entered shop by emergency entrance in side street.
(7) New shop front and ground floor fixtures completed. New lift completed and working.

Apart from closing over August Bank holiday week, business carried on the whole time and the work was completed in four months.

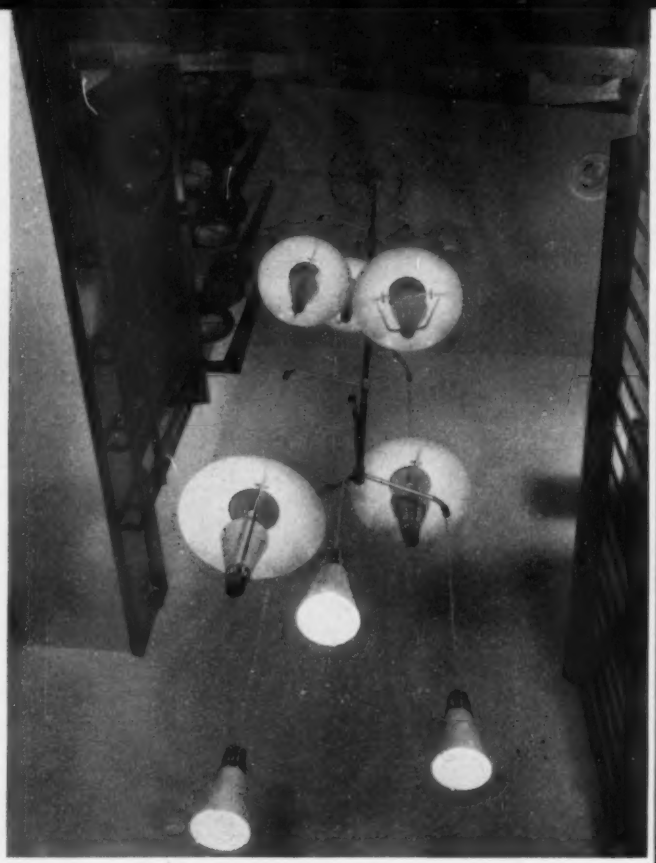
The materials of the new front are:— Fascia, Mahogany faced resin bonded ply; free standing columns, black terrazzo and Rosso Levanto marble. Window sashes, satin stainless steel. Door— Satin chromium plate. Illuminated panel—white ply glass with incised letters painted black.

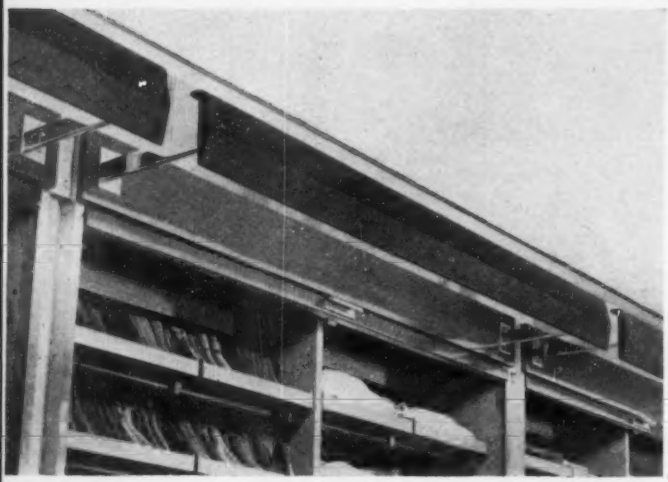
Detail of shirt display counter



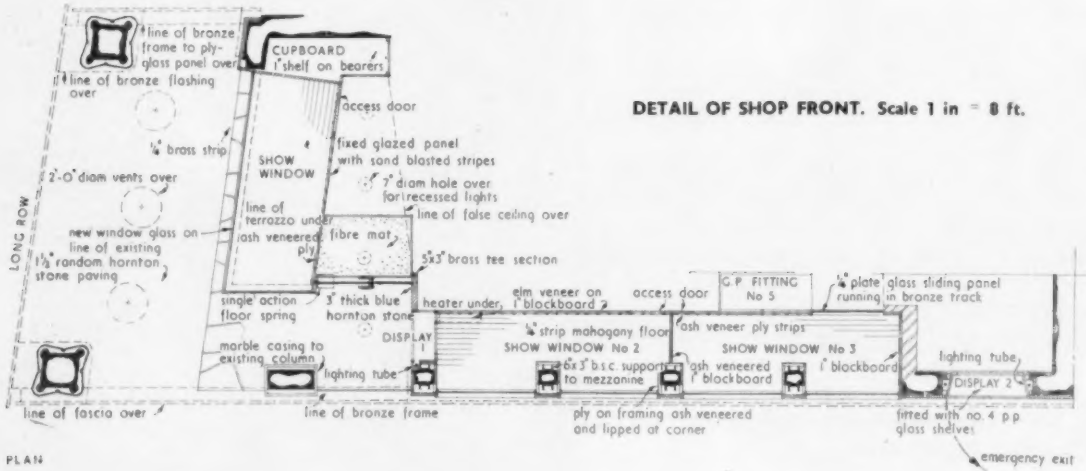
Shop at Nottingham

Detail of cluster fitting. The main drop is mild steel tube stove enamelled matt black with branch arms of polished lacquered brass. The reflectors are white with black on the upper sides. The base of the shades are also brass.





The light fitting over the general purpose fittings was specially designed to give a high intensity of light on the merchandise. The fitting is stove enamelled matt black and has polished lacquered brass supports.


line of bronze frame to ply-glass panel over
line of bronze flashing over
CUPBOARD 1" shelf on bearers
access door
fixed glazed panel with sand blasted stripes
SHOW WINDOW
7" diam hole over for recessed lights
line of false ceiling over
line of terrazzo under
ash veneered ply
fibre mat
5"x3" brass tee section
½" brass strip
2'-0" diam vents over
new window glass on line of existing
1½" random hornton stone paving
LONG ROW
single action floor spring
3" thick blue hornton stone
heater under
elm veneer on 1" blockboard
access door
G.P. FITTING No 5
½" plate glass sliding panel running in bronze track
DISPLAY 1
½" strip mahogany floor
ash veneer ply strips
SHOW WINDOW No 2
SHOW WINDOW No 3
marble casing to existing column
lighting tube
6"x3" b.s.c. support to mezzanine
ash veneered 1" blockboard
1" blockboard
lighting tube
DISPLAY 2
line of fascia over
line of bronze frame
ply on framing ash veneered and lipped at corner
fitted with no. 4 p.p. glass shelves
emergency exit

PLAN

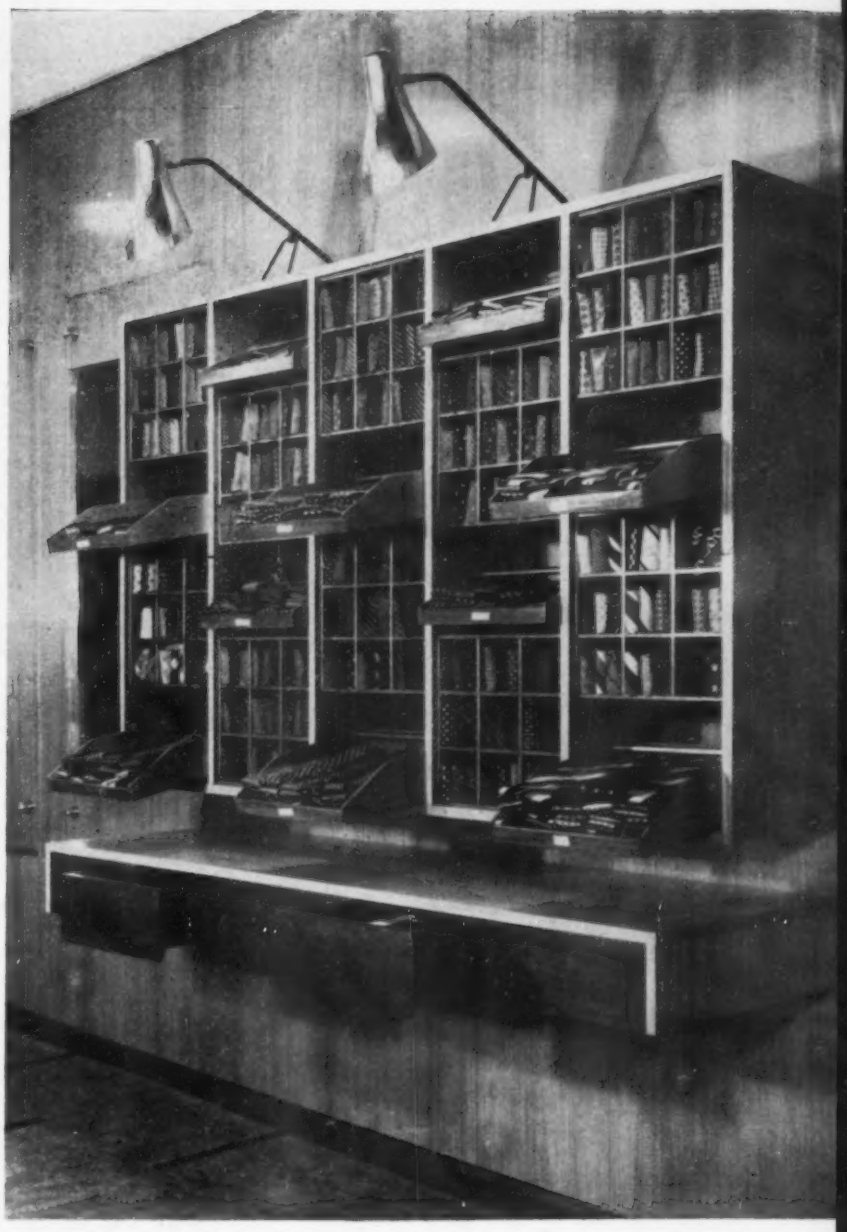
DETAIL OF SHOP FRONT. Scale 1 in = 8 ft.

General Contractor:
John Cawley Ltd.

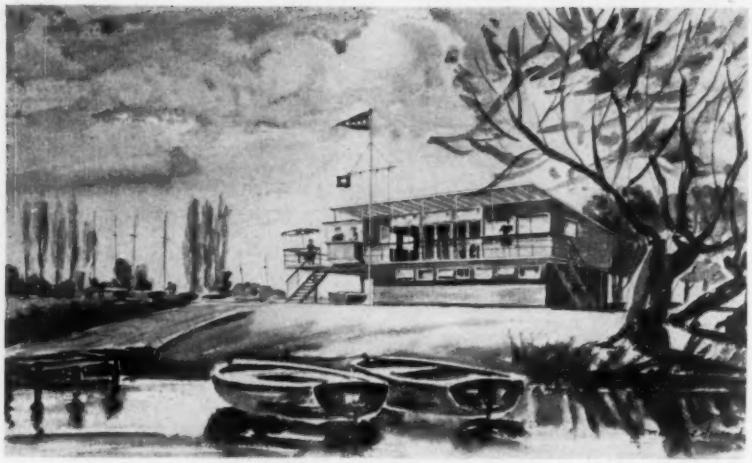
Shopfitters:
Harris & Sheldon Ltd.

Tie display fitting ➡

View on the ground floor looking towards the lift and new staircase screen. Wood—Honduras mahogany, ribbed ash panelling. Floor—Maize marble and black Korkoid. Counter edges—satin stainless steel with formica end panels. Counter legs—mild steel stove enamelled with brass adjustable feet. The fitting for collar boxes has doors of white "Warerite" with reproductions of sporting dogs in black.



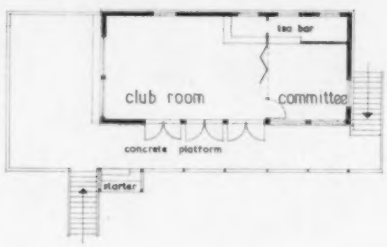
Carpets :
Heal's Contracts Ltd.
Cash System :
Lamson Engineering Co. Ltd.
Chairs :
Heal's Contracts Ltd.
S. Hille & Co. Ltd. (Tub)
Flooring :
Korkoid Decorative Floors
Ironmongery :
Yannedis & Co. Ltd.
Lift :
W. J. Furse & Co. Ltd.
Light Fittings :
Troughton & Young (Lighting) Ltd. (Standard)
Venreco Ltd. (Purpose made)
Stone :
Hornton Quarries Ltd.
Terrazzo :
Malacarp Terrazzo Co. Ltd.



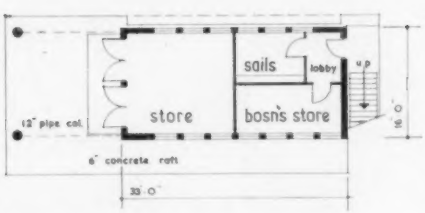
Perspective Sketch

DESBOROUGH SAILING CLUB HEADQUARTERS

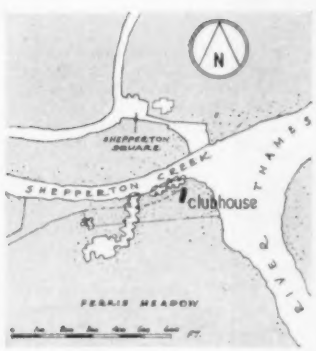
architects:
WESTWOOD
SONS & HARRISON



UPPER FLOOR



GROUND FLOOR



SITE PLAN

A NEW headquarters for this club is now being built on the Thames South Bank at the bend of the river at Shepperton. The site is virtually undeveloped parkland with a slight fall down to the waters edge, and being low lying, is occasionally liable to flooding. The water seldom rises more than a few inches and drains rapidly away. With this consideration in mind, the architect has raised the main clubroom up to first floor level and set changing rooms and stores on the ground.

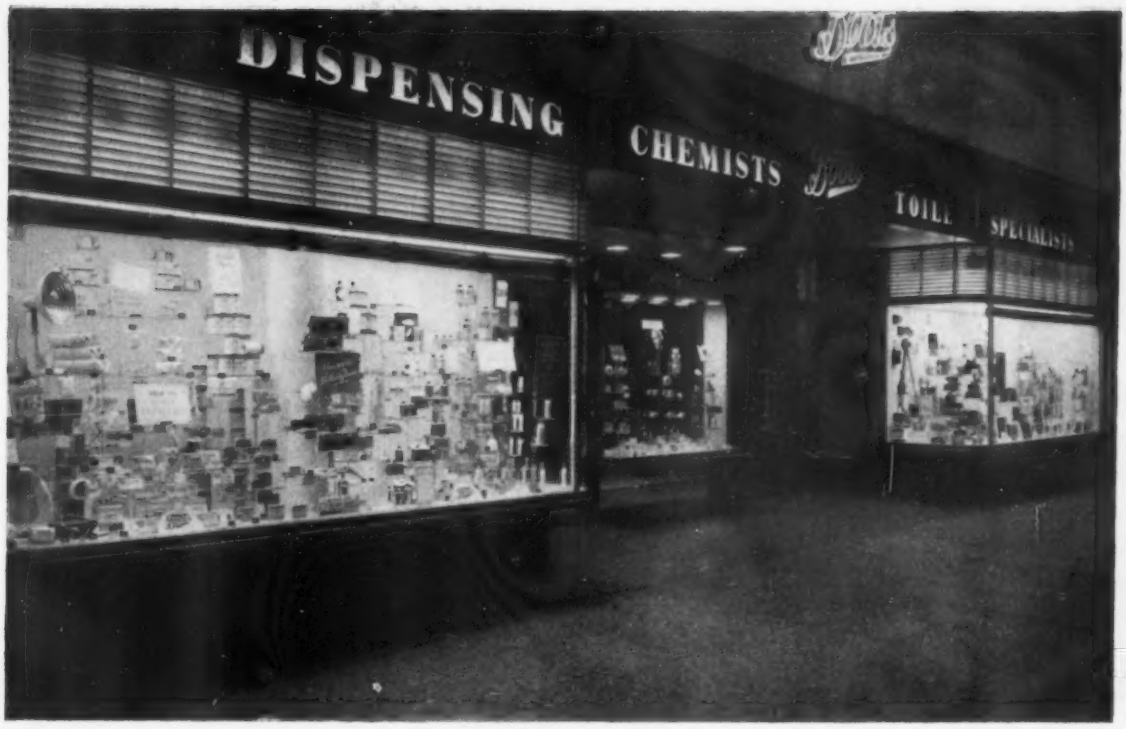
Brick supporting walls will rise on an oversite concrete slab forming the ground floor and this will be waterproofed with a "pitchmastic" D.P.C. carried over the concrete and up into the side walls to a height of 9in. Following similar practice in ships where water has to be excluded from the interior, all the doors on this lower level have a 9in concrete upstand at the thresholds. This and the waterproof mastic will, it is considered, preclude any dangers of the building being "washed out" when one of these occasional floodings occur.

It is the super-structure of this building which is its most interesting feature because although simple in form, it is the result of close collaboration with the architect and the builder before any drawings were prepared. As in many other buildings of similar nature the prime consideration was definitely to get the most accommodation for the least cost. By using standard prefabricated units already in the builders yard, the design followed a simple pattern of economic and easily erected components.

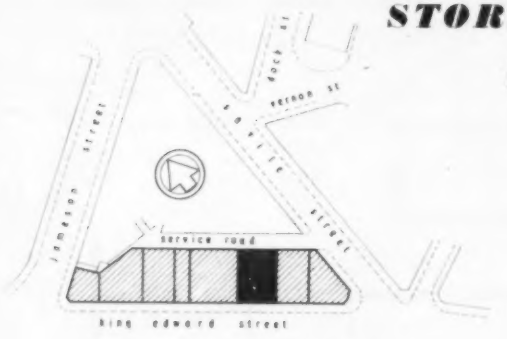
A standard but slightly modified "Ubique" timber framed classroom unit forms the carcass of the building and this rests on precast R.C. standard type beams at 2ft centres and they, in their turn are supported by 12in diameter concrete pipe columns. The floor slab too, is made up of precast R.C. paving slabs 2in thick resting on the beams.

Instead of orthodox asbestos or plywood cladding, weather boarding will be nailed direct to the timber frame and this external covering should be sympathetically effective and suit the site and character of such a river-side clubhouse and blending the building into the very lovely, open site. Advantage was taken in positioning of the view up both reaches of the river and sailing course as well as a 45deg sweep over inland fields.

Including fittings, the final cost estimate is £2,000.



King Edward Street Entrance



STORE AT KINGSTON UPON HULL

for Boots Pure Drug Co. Ltd.

chief architect:
C. St.C. OAKES, M.B.E., F.R.I.B.A.

assistant-in-charge:
A. T. ARCHER

THESE new premises replace the shop totally destroyed by enemy action in 1941 and are in a group of shops on an island site, with a frontage to King Edward Street, Jameson Street and Saville Street, erected by the Triangle Development Trust Limited. Messrs. Boots erected the main superstructure on a previously prepared foundation carried on piles owing to the nature of the ground. The whole structure is steel-framed with precast unit floors and roof beams. The front elevation is finished in 2⅝" light hand made facing bricks in flemish bond with reconstructed stone dressings to sash windows and tiled roof over front portion, to conform to a design prepared by the Architects to the Triangle Development Trust, Messrs. Gelder & Kitchen, FF.R.I.B.A.

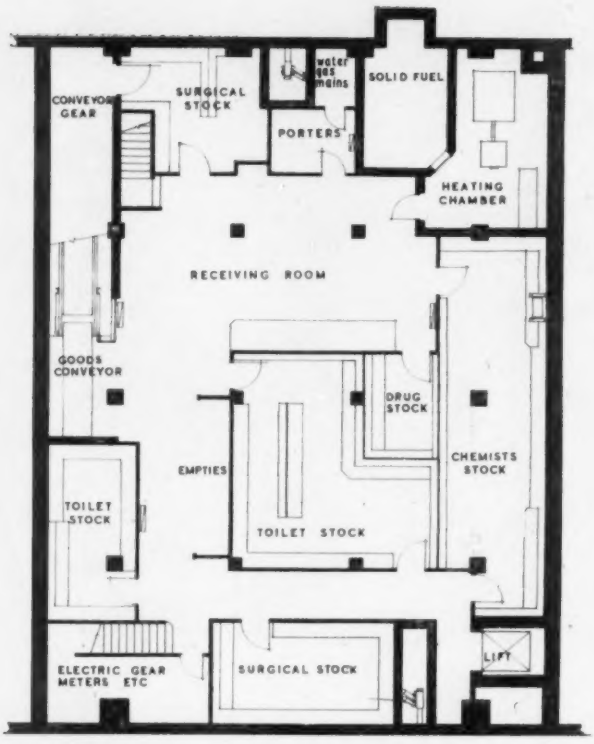
The shop consists of ground floor Sales, first floor Library with a large area available for Christmas Shopping, while the Second and Third Floors are devoted to Staff accommodation.

All Stock accommodation is situated in the basement in rooms leading off a spacious Receiving and Unpacking Room. Goods are brought into the premises by means of a reversible conveyor and unpacked goods are distributed to Sales Areas by means of a Goods Lift.

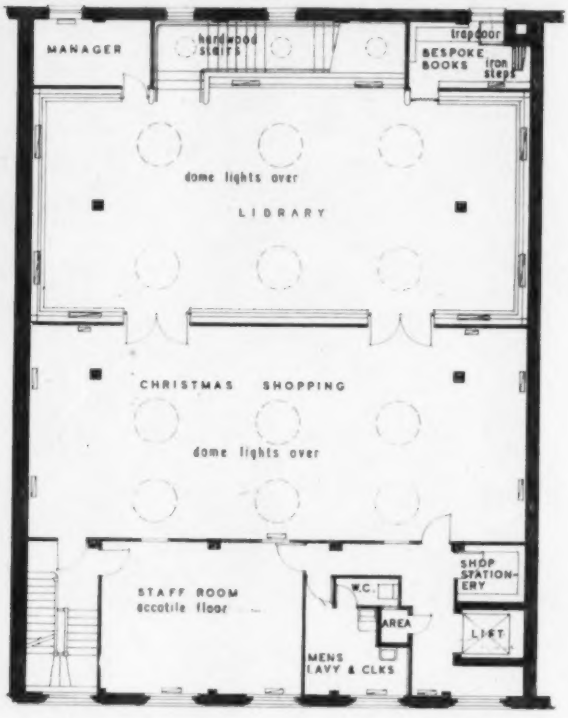
The premises are heated by means of low pressure accelerated hot water using forced convector type heaters in Sales Areas and radiators in Staff quarters, and the Boiler in the Basement is automatically fired by underfeed bunker to Boiler Stoker. Ventilation is from a duct work concealed in false friezes with axial flow type fans reversible for inlet ventilation under certain conditions.

The lighting effects over the side counters are provided by recessed spot light units, behind which are three continuous runs of cold cathode tubing, concealed behind egg crate louvres, all of which are housed in the same false frieze as the ventilation ducts. Special lighting features were designed for the island counters, each feature housing in a Cyma shaped unit, spot reflectors and a series of cold cathode tubes.

The shopfront is in hardwood sprayed Lemon gold with recessed stallrisers in Broughton Moor green slate.

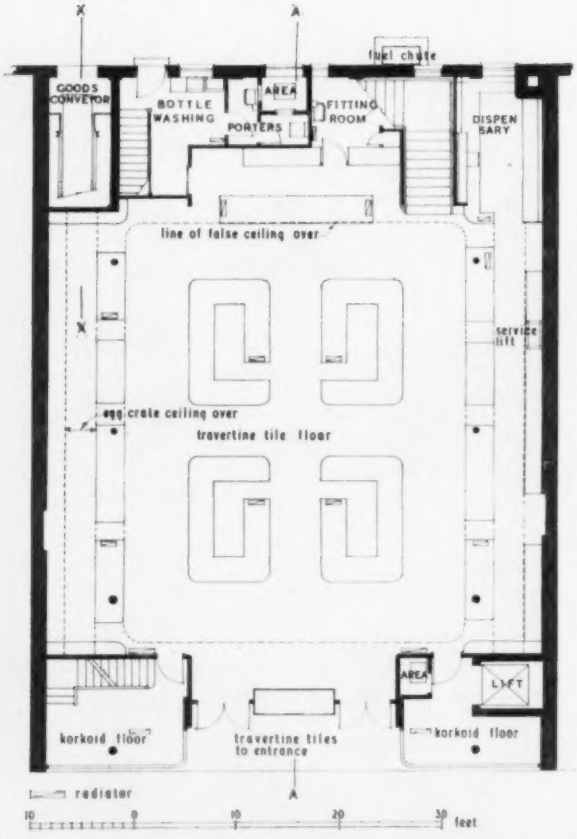


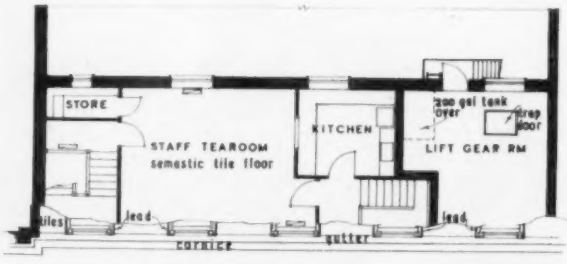
BASEMENT



FIRST FLOOR

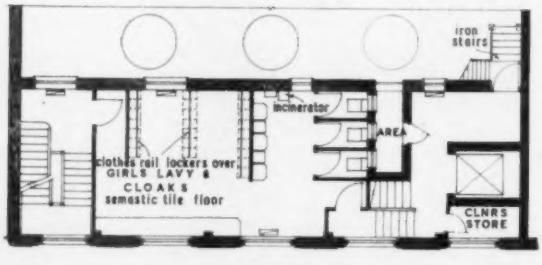
Scale: 1 in = 16 ft





THIRD FLOOR

SECOND FLOOR



GROUND FLOOR PLAN

Store at Kingston upon Hull

Chief Quantity Surveyor: A. H. Masey

Clerk of Works: W. H. Drake

General Contractor: Spooners (Hull) Ltd.

Sub-contractors

Accotile Flooring:
The Asbestos & Rubber Co. Ltd.

Asphalt:
The Limmer Trinidad Lake Asphalt Co. Ltd.

Conveyor:
Herbert Morris Ltd.

Electric Wiring:
Electra (Birmingham) Ltd.

Electric Goods Lift:
W. J. Furse & Co. Ltd.

Floor Units:
Warerite Ltd.

Gates and Escape Ladders:
Haywards Ltd.

Glass Dome Lights:
T. & W. Ide Ltd.

Heating and Ventilation:
Foster & Pearson Ltd.

Light Fittings:
Ionlite Ltd.

Slate:
The Broughton Moor Green Slate Quarries Ltd.

Steelwork:
Dawnays Ltd.

Suspended Ceilings:
Steel Bracketing & Lathing Ltd.

Windows Metal:
Henry Hope & Sons Ltd.

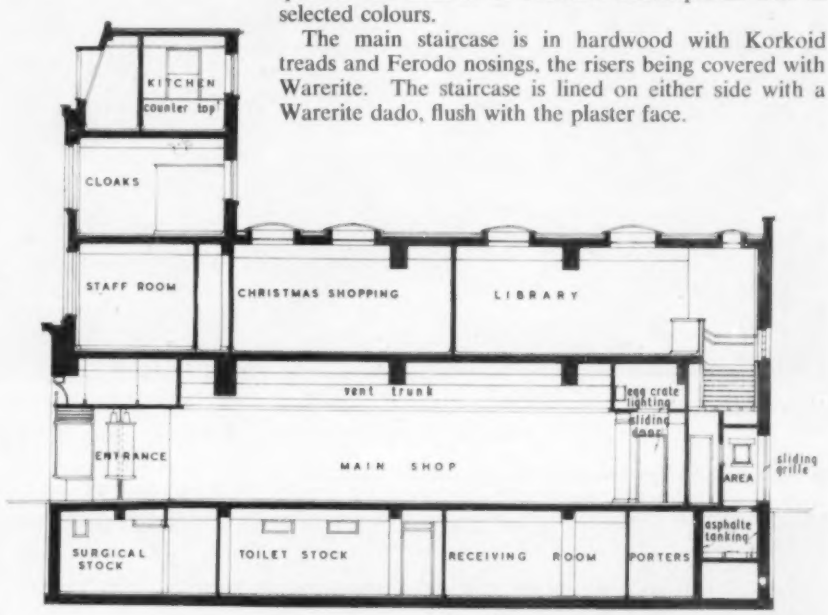
The fascia and pilasters are in reconstructed stone.

Shopfittings generally have Sycamore tops with grey Framire bottoms and black plints. Counters have Sycamore tops with fronts in polished grey Limba with Sycamore beads.

The entrance to shop has armour-plate doors with special enclosure between the sets of doors, lightly dressed to give the maximum possible view of the shop from the street, and the flank walls surrounding Staff staircase and Lift on either side of entrance has specially designed Warerite panelling to the underside of deep false frieze housing spot lights.

Flooring to Sales Areas are in Korkoid and the Staff quarters are finished in Accotile thermoplastic tiles in selected colours.

The main staircase is in hardwood with Korkoid treads and Ferodo nosings, the risers being covered with Warerite. The staircase is lined on either side with a Warerite dado, flush with the plaster face.



LONGITUDINAL SECTION AA

Ground floor looking towards entrance

Main Entrance

Store at Kingston upon Hull

Ground floor looking towards entrance

WHITHER THE R.I.B.A.?

II

THE first part of this survey dealt with the past and present of the Institute. In surveying the future the size of the future architectural profession and the Institute's resources might first be considered.

Figures in the annual reports show that in 1945 there were 9,655 corporate members of the Institute and 2,335 Students: in 1955 these figures were 16,735 and 5,118. In the decade following the war the overall size of the Institute had almost doubled. The profession as a whole has increased considerably too, but it seems that the rate of increase is now slowing down and that the profession in the United Kingdom may soon settle at a fairly stable total figure. Since the only examinations recognised for registration purposes are those recognised as qualifying for the Associateship R.I.B.A., most new entrants to the profession are likely to join the R.I.B.A. Those architects now on the register through a practice qualification can be replaced on death only by examinees. It is therefore likely that the contents of the A.R.C.U.K. register and the R.I.B.A. kalendar will become ever more similar.

In the last ten years the increasing membership has increased the Institute's resources. These have been used partly to meet increased costs due to inflation and partly to finance fresh activities. The point is, however, near when further expansion into fields of activity not hitherto trodden will have to be financed by other means. The membership subscriptions have been raised only once in the last thirty years; in 1946, when they were increased by about one-third. They now lag well behind the real value of money. An Associate has his membership of the R.I.B.A. and all the manifold activities carried out on his behalf as a member of the profession for the equivalent of about one cigarette a day. Any major new activity will inevitably have to be financed by an increase in subscriptions which is already due by any measurement of present-day commodity values.

The Institute's policy on registration has been reaffirmed recently. It is to secure extension of the Registration Acts as soon as practicable.

The Institute will certainly continue to supervise the system of architectural education in the United Kingdom. It would be most detrimental to the profession if any examination not co-ordinated with those at present recognised were to be admitted for registration purposes. To the onlooker there are elements of danger in the scheme of recognition of examinations conducted by schools for exemption from the R.I.B.A. intermediate and final. So long as the Institute maintains the most careful scrutiny and ensures some uniformity in syllabus and standards there need be no great concern; but it would be a pity if the system of recognition were expanded any further in the United Kingdom.

The real difficulties lie in the application of this system of recognition to some Commonwealth countries overseas: most of them now have their own registration ordinances and conditions of practice different from those in the United Kingdom. Some Dominions Allied Societies have delegated powers to hold examinations qualifying for the Associateship R.I.B.A., but not recognised by A.R.C.U.K. for registration purposes. The effect may be to produce two different standards of qualification for Associates. Unless they come to England it does not matter. If any do come, there is embarrassment. The two questions of membership and examinations are intimately connected and have become complex with the evolution of the Institute from an insular to a world society. A choice may have to be made soon between the alternatives of separating qualifications for the Associateship and registration or limiting membership of the R.I.B.A. virtually to citizens of the United Kingdom.

Too little has been done in the past by the profession in the way of research and post-graduate study. There are signs of an awakening interest in these activities. The R.I.B.A. will no doubt be mindful of the mandate from its Royal Charters and take a prominent part in such work.

Another major problem is the form and extent to which the Institute should look after the professional interests of its salaried members. Much has already been said and written on the trade union question. It seems that some machinery will have to be devised for surveillance of the interests of salaried members, though the Institute cannot become a protagonist on the trade union stage. Apart from any constitutional limitation it would be impracticable for it to do so in other Commonwealth countries.

So far the problems described have been principally those facing the profession in the United Kingdom, though some of them are already in evidence overseas and others will come into evidence in the course of years as the development of the Commonwealth countries catches up with the social development in the United Kingdom. It is fair to say that in post-war years, at least, the eyes of the Institute have been focused almost entirely on the United Kingdom and that the Institute has not yet become fully awake to the constitutional development of the British Commonwealth. Indeed, the reader of the notes of the R.I.B.A. Council meetings and the contents of the R.I.B.A. Journal could not be called unduly harsh if he were to accuse the Institute of a certain parochialism.

The Institute has already a status as one of the organs of the Commonwealth with an influence and prestige reaching far beyond the confines of the British Isles. It has a duty which goes beyond the survey of architecture and extends to the cementing of the bonds of state which are so necessary to hold together the British Commonwealth. Much can be done through co-ordination of professional activities and the development of closer relations with the profession in the Commonwealth overseas. The visit of Mr. Graham Henderson when President, accompanied by the Secretary, to Canada was as beneficial to the constitution of the Commonwealth as it was welcome to the profession in that country. More must be done on these lines, but even this is not enough. In the years to come the Institute must develop its functions as the parent of British architects throughout the world. A big step will have to be taken at some time in the future in the formation of some form of Commonwealth consultative organisation for architecture. It is both possible and necessary and might even evolve on the lines of an R.I.B.A. Commonwealth Council.

WILLIAM WEYMOUTH

POINTS FROM PAPERS

THE CLADDING OF BUILDINGS

A Lecture given at the Royal Institute of British Architects on 21st March by Edward D. Mills, F.R.I.B.A.

THE advent of the framed structure in steel or reinforced concrete, has meant that the cladding of buildings has assumed a new importance. When buildings relied upon their external walls for structural stability and the loads of floors and roof were carried by the external walls, the range of materials for this purpose was limited to those which not only provided a weatherproof exterior of good appearance, but also possessed sufficient strength to carry the calculated loads. With the development of the framed building the external cladding became non-structural, because loads were carried not by the walling but by the framework. In spite of this new freedom few of the earlier framed buildings employed a non-structural cladding and the traditional materials of brick and stone were used in the traditional manner in spite of the fact that their primary function was protection against weather. Even today the vast majority of framed buildings are clad with walls of brick or stone which are considerably stronger than they need be, and which add very considerably to the load to be carried by the building framework and foundations.

The development of new cladding techniques and the general appreciation of the advantages to be gained from lighter cladding have made the range of materials available for this purpose very much greater. Not only are new materials available but experiments have shown that traditional materials can be used in new ways, so that their special merits can be exploited. Before reviewing some of the more important cladding techniques and materials it is essential that the functional requirements of the cladding to a framed building should be briefly considered. We have already seen that structural strength is of less importance in the cladding of a framed building than other characteristics, but it must be remembered that traditional, load bearing walls, because of their thickness usually automatically solved many of the problems such as weather resistance, permanence and freedom from thermal movement that we now encounter with lighter non-structural claddings. With non-loadbearing claddings one of the primary problems is weather resistance, particularly in tall buildings exposed to the elements. The prevention of moisture penetration through the external walls of any building is always a problem of importance. When we consider the fact that a heavy rainstorm will give a water run-off from a building with an impervious surfacing of something in the region of one gallon of water per foot run per storey height per minute, or anything from 3 to 4 thousand gallons per minute on a 25 storey high building of reasonable size, the extent of the problem can be easily visualised. If a building is not faced with an absorbent material which can take up some of this moisture and lose it later by evaporation, the full burden of this moisture is placed upon the joints of the cladding system. If we have an impermeable surface we need a perfect joint, which is difficult both to make and to maintain.

Joints in any cladding system are a troublesome problem for thermal and structural movement can cause change of size in the unit members and open up paths for moisture penetration. If no special precautions are taken, movement of 1 inch in 150 feet can be expected as between summer high temperatures and winter low ones, and if we do not provide for such expansion nature will deal with the matter for us. On a tall building temperature differences between the top and bottom storeys will further complicate the issue, for example the temperature at the top of the Empire State Building, New York, average from 3 to 9 degrees lower than that at street level, with a maximum recorded difference of 24°. Admittedly this is the tallest building in the world—1,250ft high excluding the 222ft television mast—but lower buildings will still have this problem to a lesser degree. With a vulnerable jointing system wind pressure can also facilitate moisture penetration. To quote the Empire State Building again, at the top 60-80 m.p.h. wind speeds are common with a record of 125 m.p.h. On

Patent glazing cladding to school in Yorkshire. Architects: Architects' Co-Partnership.

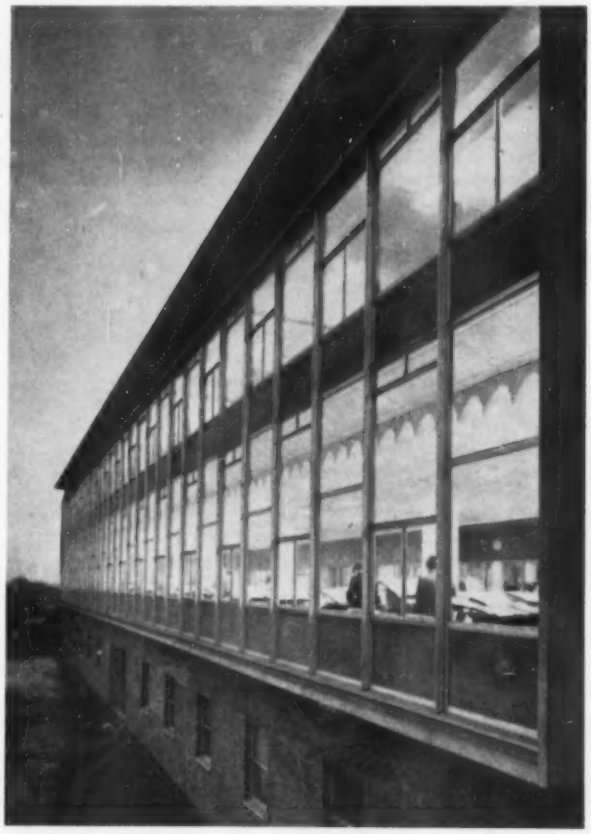
Pressed metal curtain wall to Oxford Street store. Architects: Robinson & Bull. Infill of metal windows and coloured ply-glass with breeze block fire protection behind.

lower buildings on exposed sites this factor has led to trouble, the outstanding example being the United Nations Secretariat—40 storeys, 554ft high—where driving rain forced by high winds travelled up the unabsorbent face of the building, forcing its way through weepholes and past drips designed to carry water away on its normal downward flow.

Higher heating standards in modern buildings demand better thermal insulation for the sake of economy, and if our non-traditional cladding materials do not have a low thermal capacity in themselves, insulation must be provided as an integral part of any cladding system or be closely related to it. One problem is the fact that high insulation levels often seem to produce condensation and warm humid air from the inside of a building which finds its way into a cold unventilated cavity will condense on the cold inner surface of an impervious metal or glass cladding material. With an absorbent cladding or one faced with an absorbent material the moisture can distribute itself in the pores of the material and evaporate out harmlessly. Alternatively a vapour barrier can be incorporated in an inner lining to prevent the humid air from reaching the cold surface.

With any form of cladding fire protection and the reduction of the risk of fire spread is a matter of importance. Byelaws and building regulations specify from 1 to 4 hours fire resistance for external walls of buildings, depending on the position of the structure and its intended use. Most authorities will accept a three foot high fire protection back-up wall behind a cladding with a low fire resistance, or alternatively a projecting nib of 3ft girth at each floor level to form a fire break between floors. This latter solution has certain advantages which will be mentioned later, but it automatically reduces the possibility of continuous cladding. It does, however, facilitate the use of certain types of storey height panel.

The accumulation of grime and the gradual discolorisation of many traditional buildings in a comparatively short time, particularly those in our polluted city atmosphere, is often politely referred to as "natural weathering", and on some buildings this kindly action of the elements, gradually obliterating the architect's cruder details, is to be welcomed. With non-traditional materials this action of smoke, weather and time cannot be so easily explained away; it is obvious to all as deterioration and decay, resulting often in physical breakdown and failure. Materials chosen, therefore, for the forms of non-traditional cladding we are discussing, must be permanent both in colour and texture, and where they can collect dirt and grime they must be capable of easy cleaning and maintenance. If a high building cannot be maintained easily it will be neglected with discouraging results. This problem is of particular importance in the case of buildings clad with metal or glass, where accumulated dirt is easily seen. It is essential that facilities for cleaning and repair to such buildings should be incorporated as part of the structure. The permanent cleaning gantry designed for the United Nations Secretariat building was ultimately omitted on economy grounds and even regular maintenance jobs such as window cleaning must be carried out in the "traditional" but extremely hazardous manner. The window cleaner sits on the cill of the window restrained by his safety belt hooked on to buttons on the window mullions. The United Nations cleaning gantry was used on the Lever Building, New York, and the entire face of the building can be cleaned in relative comfort in 116 man hours. This work is carried out regularly and the perpetually clean and sparkling appearance of this building is due in no small measure to the ease with which it can be thus maintained. Buildings using this type of cladding material must be serviced in this way, and it is of interest to note that at least one recent building in this country, the L.C.C. Comprehensive School, Putney, is fitted with a permanent cradle rail for window cleaning and maintenance work. The projecting nib fire break mentioned earlier offers another method of access for cleaning and repair, for although it is usually limited in width, on



Mitchells Drawing Office, Peterborough. Architects: Howard Lobb & Partners. Aluminium curtain wall with riven slate infilling panels.

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medium height buildings—it does provide a reasonable foothold for window cleaners.

The permanent concern of architects and clients is the ever rising cost of buildings and the length of time needed for their completion. The cladding used for a building can influence the cost to a considerable degree. We are continually being reminded, and rightly so, that the conventional 11in cavity wall costs in the region of 5s to 6s per square foot. If alternative non-traditional cladding techniques are to become a permanent feature of our architecture, the question of cost must be tackled seriously. This is where manufacturers can help and where early collaboration between designer and manufacturer can produce useful results. On the credit side lighter wall claddings require less framing material, lighter foundations and are easier to erect. On the Aluminium Company of America's office building in Pittsburg, U.S.A., the use of an aluminium panel cladding reduced the weight of the structural steel frame to half that of a conventionally clad building, giving a saving of 10,000 tons of steel. The timber and glass cladding to the Gordon McKay Physics Laboratory block at Harvard University showed a saving of 50,000 Dollars (nearly £18,000) over the normal brick spandril wall with metal window glazing, and similar experiences in this country could be quoted.

Speed of building and the reduction of site labour is also of great importance and here again non-traditional cladding can show useful results. The precast concrete panel cladding systems originally devised by the Hertfordshire County Council's Architect played an important part in the speedy erection of that Authority's schools, being appreciably quicker than normal brickwork. The aluminium cladding system on a recent New York office block of 26 storeys in height, using 1,800 panel units, was completed in 6½ days, resulting in valuable savings in labour costs and an earlier rent return.

Non-traditional claddings usually have a lesser overall thickness than traditional claddings, and on a multi-storey building this can mean a surprising addition to the usable floor area; for example, if a 20 storey building 100ft long by 30ft deep has 6in thick external walls instead of 12in walls, a net gain of some 3,200 sq feet of floor area is achieved (an addition of over 5 per cent) on the same size building plot, a matter of some consequence with floor space let at £2 per square foot. It can readily be seen, therefore, that non-traditional claddings have their material benefits as well as their practical problems. Admittedly the latter must be solved if the former are to be enjoyed.

Cladding of the kind under discussion must necessarily have a considerable influence on the aesthetics of our buildings. Traditional styles and forms cannot be successfully duplicated in structures clad in precast panels, metal panels, sheet materials or curtain walls of metal and glass. The non-structural nature of the cladding employed must of necessity be expressed in the architectural form of the building, whether the cladding is in the form of an "overcoat" wrapped around the structural frame, a panel system from floor to floor, or a non-structural infill to a cellular box frame. Great care is needed in the design of buildings of this nature, quite apart from the need for careful solutions to technical problems. A whole street of Lever Buildings could become monotonous, and the building which may look superb through the lense of the Architectural Review photographer's camera in the right sort of weather, is sometimes merely dull when the sun is not shining from the right quarter. We must give thought not only to colour and texture in our building claddings, but also to scale, pattern, contrast and the modelling of the building and its elements. This is particularly true where large, tall blocks are concerned and where there is a strong

Mayo Clinic, Rochester, Minnesota. Architect: Ellerbe & Co. Corrugated aluminium extrusion spandril panels.

temptation towards the smooth unbroken slab such as the United Nations building, which demands some form of large scale modelling, for instance on the roof line. Mies van der Rohe's steel and glass apartment towers in Chicago, on the other hand, with their strong pattern of heavy steel mullions, create their own detailed interest and have a remarkable and unique architectural character. The non-structural nature of these mullions can be clearly seen when their method of erection is understood.

Leaving these general comments which concern, at least in part, all forms of non-traditional wall cladding, it is essential that the three main lines of development in the cladding of buildings should be briefly surveyed. For the purpose of this paper I have narrowed the field to three major categories: Heavy Cladding—stone slabs, precast concrete slabs, concrete sandwich slabs and concrete storey height panels; Light Claddings—including the various types of curtain wall and light storey height panels, and Sheet Claddings—the smallest group including asbestos cement, plastics and various sheet metals.

Heavy Claddings

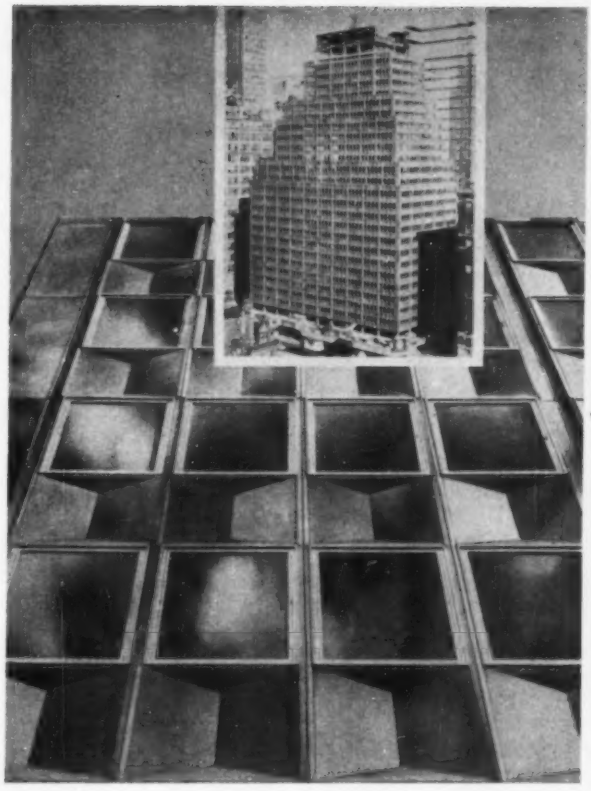
Natural stone is one of man's oldest building materials. From early times until the present its attractive appearance, enduring qualities and strength have made it an essential part of our architectural heritage. Even with the development of the non-loadbearing wall it has continued to be used as a walling material, as an outer skin bonded to a cheaper backing of brick or concrete. The rising cost of quarrying, transport and building labour, together with the weight and slowness of traditional stone construction is, however, rapidly forcing it out of the category of economic building materials. If it is to retain a place as a cladding for contemporary buildings, new ways must be

found of employing it. As a thin slab cladding natural stone still has a considerable future, as a number of Continental buildings prove. The technique normally employed entails the cramping of thin stone slabs 1¼in-2½in thick to a brick or concrete backing wall. The chief problem is weather proofing. Where a non-absorbent stone is used, the whole burden of rain falling on the face of the slab is taken by the joints, the moisture may be drawn by capillary action into the space between the slabs and the backing wall, where it may run down and find its way out lower down the building or seep through the inner lining. This suggests a perfect joint or an absorbent slab, the latter being more easy to achieve than the former. Moisture penetration of this sort can have disastrous results, particularly in severe cold weather.

On the Congress Hall at Zurich large scale failure of the stone facing slabs took place as a result of moisture entering through the joints of the travertine marble facing slabs and the consequent freezing or the thermal movement at a time of extreme winter temperature change which caused a failure of the metal cramps. Denzil Nield reports this in his 1949 Bossom Report and states that some of the slabs were 3ft × 7ft and only 1in thick with two cramps at the bottom and top of each slab. The thinness of the slabs limited the size of the cramps and they were incapable of supporting any load greater than the slabs they held individually. A single failure, therefore, had a cumulative effect and a large area of facing fell off as the result of failure at a few fixing points. The logical solution would appear to be the introduction of additional structural support at floor and cill level to limit the possible load on the cramps. It is important, too, that cramps should be of rustless metal to avoid unseen corrosion and subsequent failure. A material which could undoubtedly be used in this way—as a spandril panel—is slate, which has many attractive qualities; although high in price its permanence should make it a valuable heavy cladding material. Slate was used on this recent building at Peterborough as the infill material to a curtain wall system. For buildings where cost is not the primary consideration slate, granite, marble and other thin stone slabs can provide a handsome and lasting cladding.

The T.U.C. Memorial Building for example employs 2in granite slabs tied back with brass cramps and corbels to concrete structural spandril walls, each slab being also fixed to the adjoining one by brass hooks. All horizontal faces are protected from moisture penetration by cills or metal flashings.

Since the war a remarkable advance has been made in the production of precast concrete cladding units, at competitive prices. Much of the credit is due to the Cement and Concrete Association, who together with the industry have carried out a great deal of research and experimental work in this field. One of the earliest examples of precast concrete cladding panels can be seen on the flats at Drancy in France built nearly 20 years ago, where 12in wide tee shaped storey height slabs are hung from a steel cladding rail. The slabs are 1¼in thick and are faced with white Carrara marble pebbles, which have remained in spite of wartime neglect in a remarkably good condition. The weakness of the system was the mastic joint filling which has given trouble. This system was the forerunner of many others, the best known in this country being the one first employed on the Hertfordshire County Schools and later by other authorities. This was originally a storey height vertical slab system, but later became a horizontal slab system. The slabs are 2½in thick, reduced to 1¼in at the centre, 8ft 3in long and 1ft 4in high. The horizontal joints are tongued and grooved and the vertical joints against stanchions have draining grooves and are left open. The members are fixed to the stanchions with sherardized hook bolts. The standard finish is a white chipping, but alternative exposed aggregate finishes can be employed and moulded or texture surfaces offer considerable scope for patterning.



Aluminium storey height panel cladding to office building, New York. Architect: Emery Roth.

With any form of precast concrete unit the question of surfacing is very important. Once more the alternatives are a perfect joint with an impervious slab, an absorbent slab or a jointing system which drains mechanically. The M.O.E. school at Worthing has a precast concrete panel system of special interest, using 1¼in thick shaped slabs 20in deep, with open horizontal joints through which any water penetrating the external skin may escape.

One of the more recent concrete slab developments is the sandwich slab consisting of a weatherproof outer face, an insulating core and a permanent inner face, or one to which a lining can easily be fixed. In the latter case woodwool slab provides a good insulating core, and in the former lightweight concrete has been used successfully. At a factory at Eastleigh the outer surface is exposed aggregate of a pleasant pinkish colour, a light weight concrete core, with a dense concrete inner face. The slabs are storey height, some up to 16ft high, held in a concrete curb at the base and a precast concrete cill at the head. They are 12in wide and 6in thick and were erected quickly with a simple crane; the finished wall was cheaper than the normal 11in cavity brickwork and considerably quicker in erection. M.O.E. schools at Wokingham and Coventry have also used a sandwich technique.

Large storey height panels in concrete have been used in America with success, incorporating window openings in the assembly. The 50ft Building in Miami has five storeys above the ground floor entirely clad in light weight

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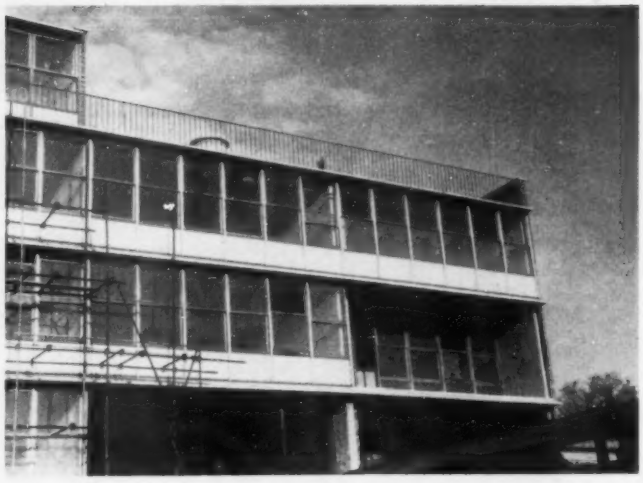
precast concrete panels with a quartzite surface, each panel is 7ft 11½in wide by 11ft 5in high by 4in thick, with a 3ft 6in × 6ft 0in window opening in the centre. They are bolted back to the face of each floor slab so that every panel projects 4in beyond the one below. ½in open joints are left for drainage with an aluminium check backed up with mastic to prevent water penetration. Another interesting development is the Dock Labour Board Building on the Albert Embankment, which also uses large precast concrete storey height wall cladding units. The panels are 3in thick precast concrete slabs with a Portland stone face, 24in wide and 10ft high. Each panel is bolted to the structural concrete beams; a nib at the top of the panel is bolted to a projecting lip at the bottom of the beam. The panels are bolted together horizontally. The total wall thickness is 18 inches made up of the 3in slabs, an 11½in cavity which contains windbracing, and a 2½in inner thermal lining.

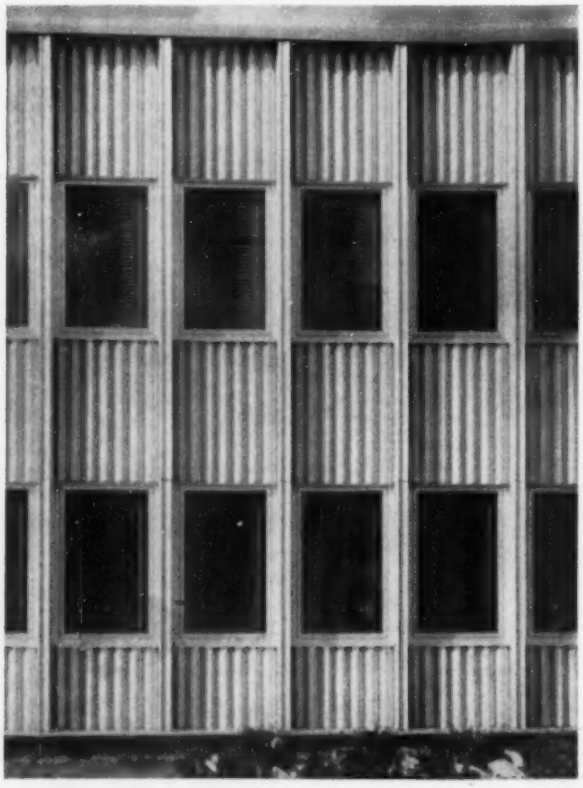
Light Cladding

Passing to light cladding, the most important development in this field has been the emergence of the curtain wall, with such buildings as the United Nations Secretariat and the Lever Building in America providing large scale experiments. Curtain wall systems generally consist of lightweight cladding materials held back to the structural frame of the building by means of an independent framework of wood or metal, thermal insulation usually being provided separately. Considering first the materials available for the infilling panels, a wide range is already available and most meet the demand that they should be tough, durable, light in weight, colourful and rigid. The list includes glass, either plain or wired; heat absorbing glass; multi-pane glazing units, and coloured stove enamel glass; asbestos cement painted, mineral surfaced or veneered with a metal skin; resin bonded plywood, plastic sheet, stainless steel, aluminium and stove enamelled metal sheets. Glass has obvious merits, it is easily cleaned, providing the proper facilities are provided and both the stove enamelled variety and the multi-pane units with a centre membrane of coloured glass fibre offer a wide range of textures and colours. In company with the American heat absorbing glass any coloured glass or glass over a coloured backing needs care in detailing. Experience has shown, particularly on the Lever Building where heat absorbing glass was used, that such materials to absorb a considerable amount of solar heat and unless adequate glazing tolerance is allowed, widespread cracking of the panels may result in hot weather. On the Lever Building collected solar heat also dried out the glazing mastic at an abnormal rate, causing moisture penetration. Manufacturers' recommended glazing sizes must also be scrupulously observed or failure through abnormal wind pressure may result.



Quintin and Kynaston Schools, London. Architects: Edward D. Mills & Partners. Storey height Canadian red cedar cladding panels with ply-glass infilling. Concrete fire stop nibs at floor level.

Alcoa District Sales Office Building, Cincinnati, U.S.A. Architect: Paul Schell. Curtain wall of coloured corrugated aluminium.



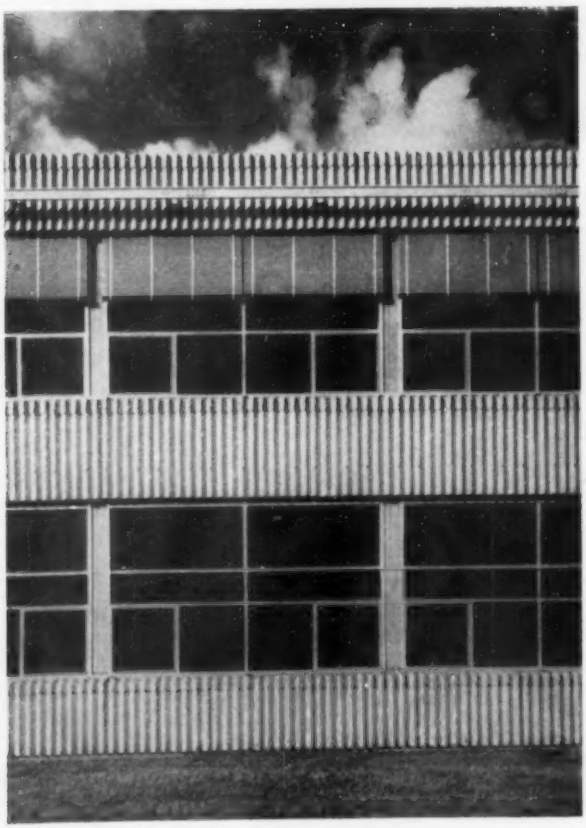
An asbestos sheet veneered with silicon treated 24 gauge embossed aluminium will be available shortly in this country for curtain wall infilling, with maximum panel sizes of 4ft wide and 6ft length. The surface finish is a pleasant grey colour. Asbestos sheets can also be painted, finished with a mineral surfacing or veneered with a vitreous enamel steel sheet. Infilling panels of porcelain enamel steel sheet on a honeycomb paper insulating core were used for the early sections of the General Motors Research Buildings, Detroit. Considerable trouble was experienced with moisture penetration; the panels bulged when the bond between the core and the steel skin separated. The core adhered satisfactorily to plain metal, but to equalize the stresses in the sheets both sides had to be enamelled and the adhesive used was not strong enough to hold the insulating core. When insulating block was used as a core, the block disintegrated and the glue held. For the final buildings aluminium panels were used, enamelled on the outside only to avoid an inner smooth surface inadequate for gluing.

With thin stainless steel or aluminium on a suitable

core, the main problem is the gauge of the metal; this buckles and distorts if it is too thin. Corrugation will help to overcome this difficulty or alternatively cast panels have adequate rigidity with increased weight. Plastic panels of cellular form filled with vermiculite concrete for fire protection have been employed at the I.C.I. Research Laboratories at Welwyn, the mullions being rebated prestressed concrete members, and at Dartford Technical College, where an aluminium assembly was used. Better colours and a wider range of surface treatments would be appreciated. In schools in Yorkshire resin bonded plywood panels give a rich effect in contrast with the adjacent glass infillings.

This list of infill materials will undoubtedly expand during the next few years. The main problem with curtain walling still remains, the method of holding together the sheets of chosen panel material. American systems employ aluminium members, for example the U.N. Secretariat; stainless steel, Lever Building and the Bakers Institute, Chicago; steel sections with asbestos panels, Lake Meadows, Chicago; and timber with glass infill at Harvard Physics Laboratory. In this country we have a number of proprietory systems, including an aluminium mullion and transome system. A system of galvanized steel flats with aluminium cappings which has also been used in the U.S.A., several systems built up from metal window sections, pressed steel composites and those based on the patent glazing technique with its carefully developed arrangements for drainage. This latter technique is unknown in the U.S. but experience here suggests that it is a logical approach to the problem. Precast concrete mullion systems are popular on the Continent, but have not been widely developed here yet.

Asbestos Cement factory near Heidelberg. Architect: Dr. Ernst Neufert. Corrugated asbestos cement cladding.



Progress photograph of 860 Lakeshore Drive, Chicago. Architect: Mies van der Rohe.

At this point a brief mention must be made of the use of mastic in curtain walls. It is unwise to assume that mastic is the answer to every jointing problem, however it is employed. It has a definite place if it is used with care and intelligence. Briefly, it must remain in a plastic state, it should be protected from the weather to reduce oxidation and should be considered primarily as a second line of defence. It should never be used in a loadbearing capacity and should be of adequate size to take up movement and allow for oxidation. Consultation between manufacturer and user is of vital importance. An interesting alternative jointing technique developed for the General Motors Buildings, Detroit, is the extruded neoprene gasket, rather like a car weather stripping, which has been employed as the joint between mullions and infilling panels after failure of the original mastic. The main question here concerns length of life, for natural rubber and synthetics are subject to oxidation through the action of ultra violet light. Time alone will prove the effectiveness of this technique. Generally mechanical joints which deal with the water penetration by drainage methods are to be encouraged with the other techniques as a second line of defence.

Timber curtain walls are beginning to appear in this country, usually specially designed by the architect of the building concerned, like the Mayfield School at Putney consisting of a storey height timber framing unit with metal opening lights. A 4in clinker block fire stop lining is provided separately and spandrils are filled with ¼in cast glass in front of a ¼in stove enamel asbestos sheet. The Harvard Physics laboratory mentioned earlier is another example. Many of the problems found with metal systems seem to be absent from these timber ones.

Timber storey height panels in Western Red Cedar, have been used with success, are cheap to make and easy to erect. In the Quintin School in London, combined with the floor level fire stop and box frame construction, they have considerable economic and technical advantages, little maintenance is needed and the double hung sash window in this instance has many advantages. Of the metal storey height panels, stainless steel both in sheet and cast form is being used in America, but high costs make it an unlikely material for this country. The aluminium storey panel on the Alcoa building mentioned earlier has great

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possibilities. It is designed for rapid erection and its jointing system which drains out any moisture seems to be foolproof. The panels employed are 6ft wide by 12ft high of ¼in aluminium sheet and incorporate a pivot hung window assembly. Erection of 30 storeys took 10 men one month. The panels were designed for a wind load of 34lbs per sq ft and weigh 2½lbs per sq ft. With the 4in "perlite" back-up wall the cladding has a 4hr fire rating and a "U" value of 0.14.

Sheet Cladding

The final category of cladding time will permit us to consider very briefly is sheet cladding. Sheet claddings are generally quick in erection, light in weight and economical in cost. Asbestos cement sheeting fixed to cladding rails has long been an accepted industrial technique of cladding. Although a range of assorted patterns is available, what is badly needed is a coloured asbestos cement sheet with a reliable secret fixing system and a carefully detailed set of accessories for corners, cills, eaves and similar positions.

A double asbestos skin bolted to a steel frame was used at the M.O.E. school at Belper, with 3in precast fibrous plaster storey height inner lining panels. The system which is based on a 3ft 4in module, is low in cost and light in weight; the "U" value of the complete wall was 0.19. The principal disadvantage is the unpleasant "natural" colour of the sheeting, which must be painted if any alternative to the dirty grey colour is required. Such treatment will of necessity require fairly frequent renewal —thin asbestos cement also tends to get brittle with age.

A number of very carefully designed German buildings have been clad with asbestos cement sheeting. The obvious economic advantages should make the production of a coloured, well designed asbestos cement cladding system well worth while. Corrugated plastic sheet is available, but again colours are dull and uninspiring. Stainless steel and aluminium sheets are also available in the natural finished metal, which may well lose a good deal of its initial brightness after exposure to weather. Aluminium has about twice the thermal expansion rate of ferrous metals and American manufacturers recommend expansion joints designed into the claddings of about ⅛in to every 10ft of space. American aluminium manufacturers produce brilliantly coloured fluted and corrugated material. The office building illustrated at Cincinnati has panels of gold and blue between grey mullions. In this case the window, wall and mullions were shop assembled in one unit and anchored into place between 6in × 4in structural columns at 4ft centres. Fibre glass insulation was fixed behind the panels and plaster applied to metal lathing on furring channels. The total wall weighed less than 13lbs per sq ft with a "U" value of .118 for a total wall thickness of 6in. For comparison the stone faced brick—non-load-bearing walls of the Rockefeller Building, New York, weighs 155lbs per sq ft; 12 times the weight of the building in Cincinnati.

Finally, one of the oldest building techniques, that of timber cladding, can be included in this category. Vertical boarding in one of the African hardwoods, or Western Red Cedar has much to commend it. Care must be taken to ensure that conditions which encourage timber diseases are not created. For multi-storey buildings low fire resistance of timber normally necessitates separate provisions to reduce the risk of fire spread, and adequate thermal insulation must also be provided separately. Cedar has particular merits as a cladding timber as it weathers naturally to an attractive colour and does not require oiling or other surface maintenance. The L.C.C. have found it an economical and speedy form of infill panel for high boxframe, flat structures, and its cost and availability make it a logical material for large or small buildings.

Berkeley Castle

THE open country house movement received, on April 2nd, a notable recruit in Berkeley Castle. With such inducements as its easy accessibility, refreshments on the spot, and the scene of a royal murder, business (at 2s 6d an adult head) is certain to be brisk. The castle is also of very real architectural interest and importance, and the church close to it is in its own right of first-class merit.

As Leland remarked four centuries ago Berkeley Castle is not of great size. More surprisingly, in a place where the same titled family were so long in occupation as local magnates, hardly any alterations, and no major rebuilding, were done in the eighteenth century; the mediaeval fortress remains intact and wholly fuedal in appearance.

The most important single feature, taking up so great a proportion of the available area that the other accommodation is reduced to a somewhat small and congested series of rooms, is the great round keep at the castle's North-West corner. The early Norman *motte*, with its small tower on top, was not in this case demolished to make way, in the twelfth century, for a great square tower, but was left intact, minus its surmounting turret, and had built round its base a large, circular shell keep whose circumference, supported at intervals by shallow buttresses, is extremely large and whose floors do not start till one is above the level of the summit of the *motte*. In this keep, in a projecting outbuilding, one is shown the room traditionally supposed to be the scene of Edward II's murder.

In the domestic buildings, amid the cumbersome paraphernalia of pre-labour saving cooking and washing-up arrangements, the best architectural feature is the vast polygonal kitchen, in its shape recalling the Abbot's kitchen at Glastonbury but unlike the Glastonbury kitchen covered by an unusual and ponderous timber roof; here, as in most of the living quarters of the castle, we have work which goes back to the great reconstruction, within its old outer walls, of the Norman fortress in the fourteenth century.

The best of the fourteenth-century rooms is the great hall; as its floor is well below the ground level of the inner courtyard its interior is far more impressive than one expects from outside. Here, and at other points where the masons of the "Decorated" period worked, one sees many of the windows and entrances in the curious shape known as the "Berkeley arch". The outline of these "arches" consists of a half octagon, the adornment taking the form of delicate and varied cusping below and without the semi-octagonal design of the opening made through the masonry wall. So far as I know, these features are found nowhere, in this precise form, except at Berkeley Castle and in the West door of the church. But as the famous "stellate" tomb recesses of the choir aisles of Bristol Cathedral, which was the Berkeleys' family abbey and the burial place of many of the Berkeley Lords, are really half hexagons with cusping below the main outline, it is very tempting to assume that the two buildings, being contemporary, were by the same designer; the great collection of family muniments at Berkeley Castle may one day throw conclusive light on this point.

Many of the fittings and furnishings of the castle were inserted, during the present century, by the last Earl. Not all of them are in the English Gothic tradition, but they are nonetheless appropriate and convincing and add to the beauty and effectiveness of the interiors. The seventeenth-century furniture is excellent, as also are the naval pictures which reflect the strong seafaring traditions of the family and its Stratton branch.

BRYAN LITTLE

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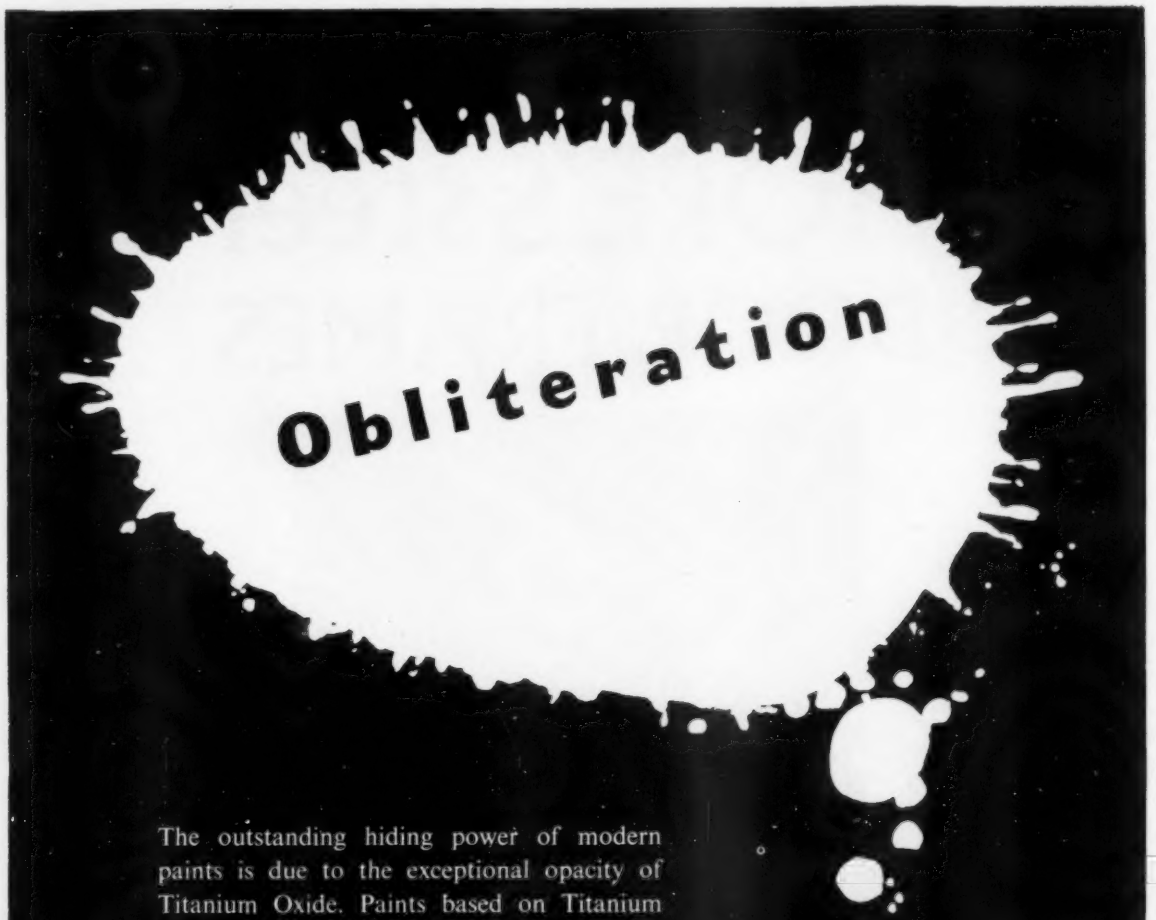

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Metal Windows

WHAT seems to have been a very long time ago it was suggested in these columns that a revision of B.S.990 for metal casement windows was overdue, but still no new and up-to-date edition appears to have been published. The standard needs to incorporate a suitable selection of windows from the now well established "Z" type and steps should be taken to include type for use in tall blocks of flats to simplify window cleaning and the replacement of the occasionally broken pane of glass. For these tall buildings inward opening types have advantages from the angle of cleaning and re-glazing but they need careful design and good workmanship if they are to be really weather-proof; from an occupier's point of view, however, inward opening windows are usually considered rather a nuisance on acount of the problems involved in the fixing and hanging of curtains.

I still hear rather frequent complaints about the "easy-clean" hinges used on windows to B.S.990 and similar types. This is not so much on account of faults in the hinges but because of the rather inadequate clearance provided when they are open to permit the easy passage and movement of the arm for window cleaning. A better answer seems to be provided by vertical pivot hung windows as this type provides greater clearance between the sash and the frame when opened. Personally I would like to see B.S.990 extended to include some "Z" types, some inward opening types and some vertically pivoted types, even if the last are more costly, in order to give architects a greater variety of choice for the many different conditions of application. More types and fewer of each seems to be a better answer then few types in many sizes.

Above all I would like to see included in the B.S. some clauses on the "fit and finish" of metal windows having lately been shown a number of examples of windows all of which were specified as being required to comply with B.S.990. The sizes, opening parts and the metal sections all seemed to comply generally with the requirements but the most obvious differences were the wide variations in fit of sashes to frames which, in some examples, were close fitting and reasonably draught-proof but in many examples the sashes closed on to the frames leaving gaps of varying widths up to nearly $\frac{1}{4}$in in some places; when windows fit badly they are very naturally the cause of endless arguments between the client, the architect, the builder and the window maker, of which arguments many could be eliminated if the B.S. would give the necessary lead as to what should be considered as acceptable limits for fits. In one example seen after six months occupation of a house the paint on the frames was dreadfully marked with dirt drawn in to the building through the bad meeting of the doors against the frames.

The standard is also rather inadequate in regard to the quality and fit of locks and bolts supplied on casement doors. One architect's complaint to the builder brought a reply that he could turn the locks reasonably well with anything except the keys provided, and certainly quite a number of those I tried would not turn easily and smoothly in spite of oiling immediately before trying them. As to bolts, many permitted a quite abnormally large amount of play even to the extent of permitting the doors to rattle in the wind.

By no means, however, should all the faults noted be credited to the makers of the windows as a number, and even perhaps the majority, were obviously due directly to bad handling and damaged by the contractors or due to failures to follow the makers' installation instructions or to build them in correctly. For example many frames had been so fixed that the sashes needed to be twisted in order that they would shut properly against the frames on acount of the failure to install them in a vertical plane and some failures had resulted from mishandling and actual damage before installation. Quite a number of frames appeared to be damaged from quite avoidable causes such as having scaffolding boards rested on them.

Omission of many fixing screws and lugs was noticeable as was the omission of the full complement of coupling bolts between frames, mullions and transomes; in fact these omissions were confirmed on one almost finished job where there was a considerable collection of fixing lugs and bolts of various types which had not been used. Examination of many of the assemblies of units indicated that many contractors not only omitted some of the fixings and couplings but seldom made use of the necessary bedding mastic at junctions; this was also borne out by the dirt staining of paintwork due to draught penetration at these junctions and in due time, especially when the outside paint begins to fail, there is a fair prospect of rain penetration. It may be that manufacturers of windows to not stress sufficiently to the builders the great importance of using enough and proper bedding mastic when assembling units with coupling bars, mullions and transomes. Equally the almost complete absence of mastic bedding and pointing at junctions with surrounding wood frames and brickwork was noticeable. Some mortar pointing around frames seemed never to have been satisfactory; one often notices wide joints or even spaces where the pointing has fallen away. Unfortunately B.S.990, although showing many instances where mastic should be used on the accompanying diagrams, makes little reference to the subject nor as yet is there a B.S. Code of Practice for the proper assembly and installation of metal windows to which specifications might refer. Perhaps the new Council of Codes of Practice will take steps to remedy this omission.

While on the subject of mastics I frequently ponder whether they will form watertight joints of equal durability to that of the materials with which they are used. I am even more dubious whether one should depend on jointings of this type to keep out the weather in spite of the fact that their use in the building industry has very greatly increased. I would like to see a B.S. set of tests for both durability and ability to remain mastic indefinitely. The varieties of these mastics are now legion and one has a feeling that some may not be as satisfactory as is desirable. I know of no method by which they may be assessed.

The subject of mastics leads me to metal window glazing putties of which, in my experience, some are not very satisfactory. Perhaps B.S.I. will one day put back the long withdrawn section of B.S.544 which covered the metal window putties. The long delay, I assume, is due to lack of agreement which I suspect may be on account of a desire on the part of some manufacturers to sell branded types without any performance data.

A new examination of B.S.990 drew my attention to the rather questionable practice shown in the standard in connection with the methods used for indicating opening lights and their "hands". The B.S. asks for the "hands" of windows to be described by looking at them from inside but it seems very probable that most architects and builders look at elevational drawings and therefore at the outsides of windows. It may be that it is best to describe the "hands" on the basis of left hand or right hand according to the hand normally used to open them from where the user stands to do this operation; if so this description should be used for all windows regardless of

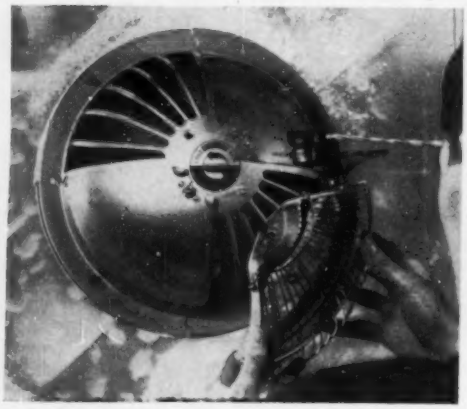
material and then the opening of side hung portions should be shown on plan rather than on elevation.

Unless I am very mistaken some suppliers of steel casement windows and doors are still not always treating them with a rust-proof finish, which in my opinion is absolutely vital as a means of reduction of maintenance costs, since if rust commences on windows it not only spreads quickly, especially in bathrooms, kitchens, larders and similar situations, but having once started it is very difficult to ensure against its continuance. Further, in my opinion, some of the rust-proof finishes used are not good enough and I have a strong preference for galvanized treatments and even then the windows still need to be handled carefully at the site to ensure that the galvanising is not damaged.

The need or otherwise for glazing bars seems to be sorting itself out gradually. The demand for vertical glazing bars seems to have diminished very greatly but the use of horizontal bars still seems to remain fairly large. I am told that this is primarily on account of the cost of re-glazing broken panes but I wonder whether in fact there are enough panes broken in houses today to justify the heavy additional burden placed on the householder and his wife, due to the great increase in labour of window cleaning when bars are provided. Having lived with and without glazing bars and with leaded lights I am quite certain that my choice is heavily in favour of large panes.

A complaint which has reached me several times recently is that some metal window firms use different notation or letter symbols for the same size and type of window and that this causes inconvenience and mis-understanding in builders offices. Is it not possible for all makers to use the B.S. notation when this is applicable, since presumably it was agreed between the users and the manufacturers association?

DUTCH UNCLE



A new electric heater for incorporation in the Colt Two-Way fan. The heater is 1 kilowatt and consists of an aluminium die-cast frame with porcelain inset supports to carry six black-wire nickel-chrome coils. The heater is fitted over the inlet port of the fan and is fixed merely by clipping it on to the two spire studs provided.

Industrial Notes

● A Claygate brick fireplace, 8 ft. wide, is on its way to Canada for installation in one of several architect-designed houses now being built by George Wimpey and Company Limited. The fireplace has been specially crated in nine sections.

● Gleem, the new self-hardening lacquer floor treatment, of a type not made abroad, has aroused considerable interest in many countries. The manufacturers, Floor Treatments Limited, of High Wycombe, state that they have received the largest number of inquiries from Switzerland and Portugal.

● The General Electric Co. Ltd. has announced the introduction of a new range of Osram tungsten filament lamps to be known as Pearl Pink. These new lamps are tinted lightly to a very pale shade of pink, which, while providing a diffuse light, leaves a smooth finish which will not collect dust or dirt. The dimensions of the bulbs are identical with G.L.S. lamps of similar ratings.

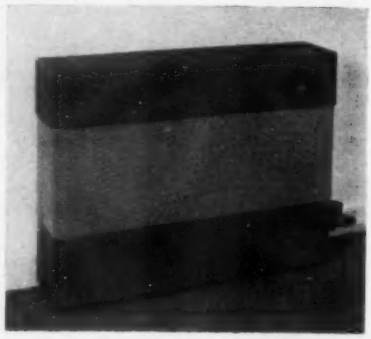
● A new type of domestic lamp is being marketed by Crompton Parkinson Ltd. from April 3rd known as the Crompton "Charmlight." In design, it is essentially of the standard gas-filled type except for the one difference that it has an externally applied glaze with a delicate pink tint. With this glaze, which is the result of many months of experiment, the lamp emits a light that purposefully emphasises the warmer and richer shades of colour.

● The Factory Equipment Exhibition at Earls Court, April 9th-14th, will be opened by the Rt. Hon. Peter Thorneycroft, M.P., President of the Board of Trade, at 11.45 a.m. on Monday, April 9th.

● Thermodare (Great Britain) has moved to larger offices at 94/98 Petty France and the telephone number has been altered to Abbey 6586-7-8.

● Matthews & Yates Ltd., manufacturers of Cyclone Fans and Fan Equipment, have opened a new branch office at Jacey House, The Lansdown, Bournemouth, telephone number Bournemouth 2493. Mr. J. R. Barlow, formerly manager of their Birmingham branch, will be in charge. Mr. A. T. Barlow will now be in charge of their Birmingham branch.

● An entirely new type of washer for use in fixing asbestos cement sheets has been introduced by The Universal Asbestos Manufacturing Co. Ltd. Known as the Uniseal washer it is made from a rubber and bitumen compound. Both diamond and round types are available. They are ⅛ in. thick, and have a soft cushioning effect which overcomes any inequalities in the metal washers. Under pressure they tend to close round the neck of the bolt and to adhere tightly to the sheeting.



The DRUgasar Balanced Flue Gas Heater is available in several sizes and designed to give convected as well as radiated heat. It requires no chimney flue and there is no projection on the outside walls. Sole Agent: F. A. Borchardt Ltd.

● The Universal Asbestos Manufacturing Co. Ltd., of Tolpits, Watford, Herts, announce the following changes in their Sales force: Mr. R. W. Evans has taken over South Wales from Mr. P. T. Lawrence, who will continue as the Company's representative in Herefordshire, Gloucestershire, North Wiltshire and West Monmouthshire. Mr. A. M. Runcie has taken over Edinburgh and East Scotland from Mr. S. J. Best, who is taking up an appointment at the Company's Head Office.

● Mr. W. W. Watt, who has been Managing Director of the British Oxygen Company Limited since 1938, retired on the 31st March, having reached the age of 65.

● Mr. S. A. Brazier, technical manager of Dunlop's general rubber goods division in Manchester, retired last month after 37 years in the rubber industry. He received the O.B.E. for his services as chairman of the committee which advised Rubber Control during the war on problems arising from the shortage of natural rubber and the conversion of industrial goods to synthetic rubber. Mr. Brazier is a Fellow of the Rubber Industry's Council and of the Institution of the Rubber Industry who have awarded him the Colwyn Gold Medal for his services to the industry.

● George Reed (Builders) Ltd. have moved to 255 Green Lanes, Palmers Green, London, N.13. The telephone numbers remain unchanged as Palmers Green 0186-7-8.

● George Cohen Sons & Co. Ltd. have reserved two stands totalling 3,875 square feet for the 1958 Mechanical Handling Exhibition at Earl's Court. The first of these, Stand No. 77—is the largest in the show.

Jack Nisbett interprets an architect's design

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Timber Notes

THE decision of the Government to sell 150,000 standards of softwood from the strategic reserve stock this year is likely to have a considerable effect upon the market. With the exception of some unsorted Finnish redwood which was bought and piled last year, all the timber has been in stock for four years. It is made up of unsorted and Fourths in Russian redwood, clears, select merchantable, merchantable and common grades in Western hemlock and Douglas fir, and some Eastern Canadian spruce in M.L.B. Thirds and Better.

Plans are being made for the disposal of this stock in three sales, tenders being invited from anyone interested in softwood parcels. The timber is scattered throughout Britain, but most of it is held near industrial centres, and in most cases the carriage would be small. The diversity of these stocks is an attraction for some builders who use timber on a large scale, and there is no doubt that contractors will be among those who tender. The stock should be in fairly good condition, for most of those parcels which had suffered from stock-piling had already been sold.

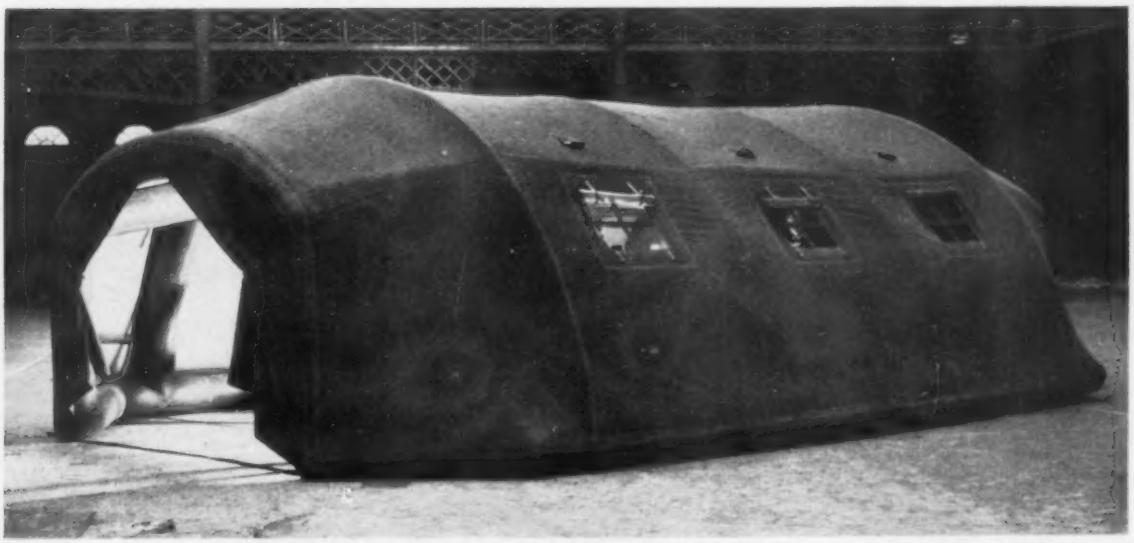
This is a tremendous sale and it is expected that prices will be somewhat below the current market level. So far the prices paid for fresh contracts have been on a par with those which circulated at the beginning of last year. The Russian offers of 200,000 standards were based on c.i.f prices of £94 a standard for 7in unsorted redwood and £84 a standard for unsorted whitewood, and just over half the quantity has been bought. Swedish prices for good productions have been around £85 a standard f.o.b. for unsorted redwood, with about £13 to be added for freight. Polish timber has been selling at £92 a standard for unsorted redwood c. and f., and ten pounds less for whitewood.

From these prices it will be seen that softwood prices are just a little lower than they were last summer, and are much nearer the mark attained at the opening of last year. Reductions have been almost insignificant, but buying so far has been on a comparatively small scale, and the Government sale may weaken the market. Certainly softwood prices should not rise at all this year, and the stocks are plentiful in all grades throughout the country.

Hardwood prices are falling a little for forward business, the Japanese oak and yang quotations being a little lower, and some of the West African timbers are easier in price. Stocks are quite good. Architects should be able to specify most hardwoods without fear that prices will increase later in the year, though dollar hardwoods so far are strong in price on the market.

Plywood prices have been falling recently. Not only is there a tremendous stock in the country, moving very slowly because of small buying by the furniture trade, but some of the shippers have quoted much lower prices for 1956 shipments. These lower prices may well lead to a wider use of plywood in building work, especially for interior decoration. There is also a movement to encourage exterior grades of plywood from Canada for ranch wall construction, but price is against this type of work at the moment.

Wallboard prices are low and stocks ample for the building trade. Here again some overseas manufacturers have dropped their prices a little, but the increased costs of freight and handling will probably take up this difference. Prices for hardboard and insulating boards for the next few months should be fairly steady. No increases are anticipated.

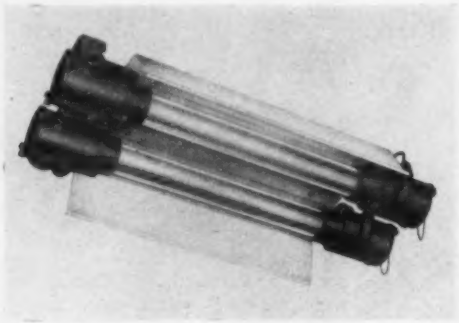


Portable accommodation can be extremely useful in the right place and at the right time. The Numax hut, by Elliot Equipment Ltd., of Llwynpia, Rhondda, South Wales, has many characteristics which should prove revolutionary in its particular field in the building industry. The main structure consists of an inflatable low pressure frame-work with a rubberised fabric covering, which can be erected single-handed in less than three minutes by means of a small six volt electric air pump. The floor is detachable and the windows which open are made of flexible clear plastic. The Numax hut has a clear floor space of 30 ft by 19ft and is 9 ft high in the centre. The whole structure weighs 160 lbs and packs into 18 in sq by 4 ft 6 in. Inside fastening points are provided for electric light and telephone fittings, six louvres supply ventilation. Doors at each end can be closed or opened from either side by zip fasteners. Striking, folding and packing can be done in a few minutes. Storage life under reasonable conditions 15½ years.

NEW PRODUCTS

A further selection from the Electrical Engineers (A.S.E.E.) Exhibition, Earls Court

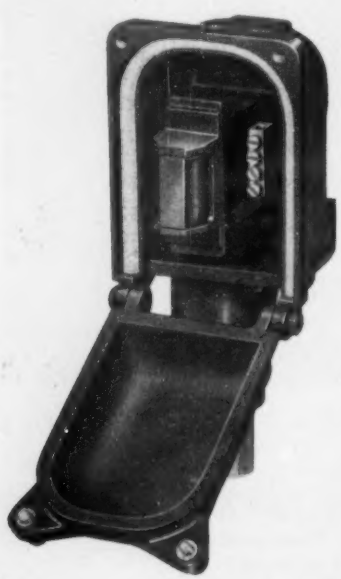
1



2

THE Electrical Engineers (ASEE) exhibition at Earls Court which ran from the 20th to the 24th of last month was the largest ever staged in this country. Over 25,000 pieces of equipment were on show, their value was over a million pounds. The exhibition's brochure was also printed in Portuguese, Spanish, German, French, Italian and Arabic.

The new products on view covered the whole range of electrical equipment, evidence of the great strides forward being made in this industry. The appearance of the fittings and equipment have not, on the whole, changed a lot for the better. Fig. 5 shows a 15 amp., 250 volt ironclad service fuse which has a particular application to street lighting. The overall dimensions are 5 5/16in by 2 15/16in by 3in deep. Known as Isco DE, it is fitted with a fuse and neutral connector and the terminals are suitable for incoming cable up to 0.0145 sq in and 0.007 sq in. V.R. tails outgoing through the lower side. It can be fitted with either a cartridge or rewirable fuse; by W. T. Henley's Telegraph Works Co. Ltd.



5

Among the many power tools on view was a new belt sanding attachment designed for use in conjunction with the GQ 6in high speed heavy duty grinder by Wolf Electric Tools Ltd. Fig. 3. Sanding belts, in a variety of grit sizes, are 24in by 2in wide. Also new by this firm is the No. 11 Flexible Shaft Set for intricate grinding, sanding, engraving and polishing.

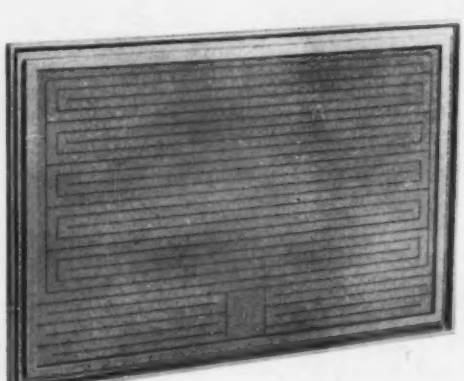
E. K. Cole were showing the Thermovent 'Radiant Glass' Thermopanel with many improvements. Type RGP1, Fig. 6, which has a different pattern on the front, uses a non-reflecting glass and has a pilot lamp mounted behind the heater which not only tells when the heater is on but gives a warm rosy glow. Size 30in by 21in by 3in deep.

A corrosive-resistant fluorescent fitting was shown by Simplex Electric for the first time, also two new flameproof fittings, one of which is shown in Fig. 2. Also shown on this stand were some additions to the 'Regent' range of switchgear; Fig. 4 is an example of a changeover switch in this range.

Holophone Ltd. displayed a comprehensive range of prismatic lighting fittings for industry, commerce and public lighting. Fig. 1 shows the new enclosed translucent unit for 300/500 watt tungsten lamps.

3

4



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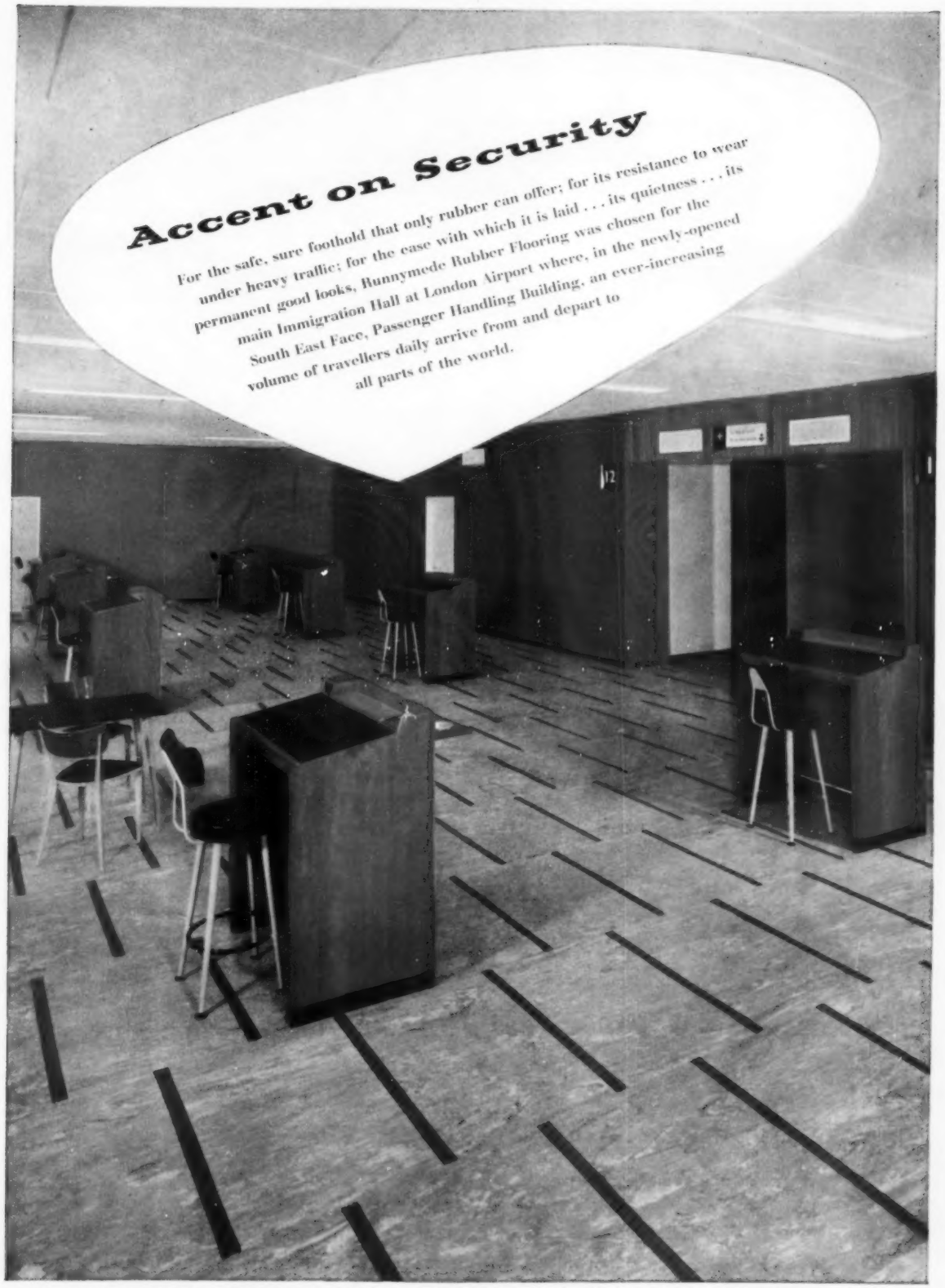
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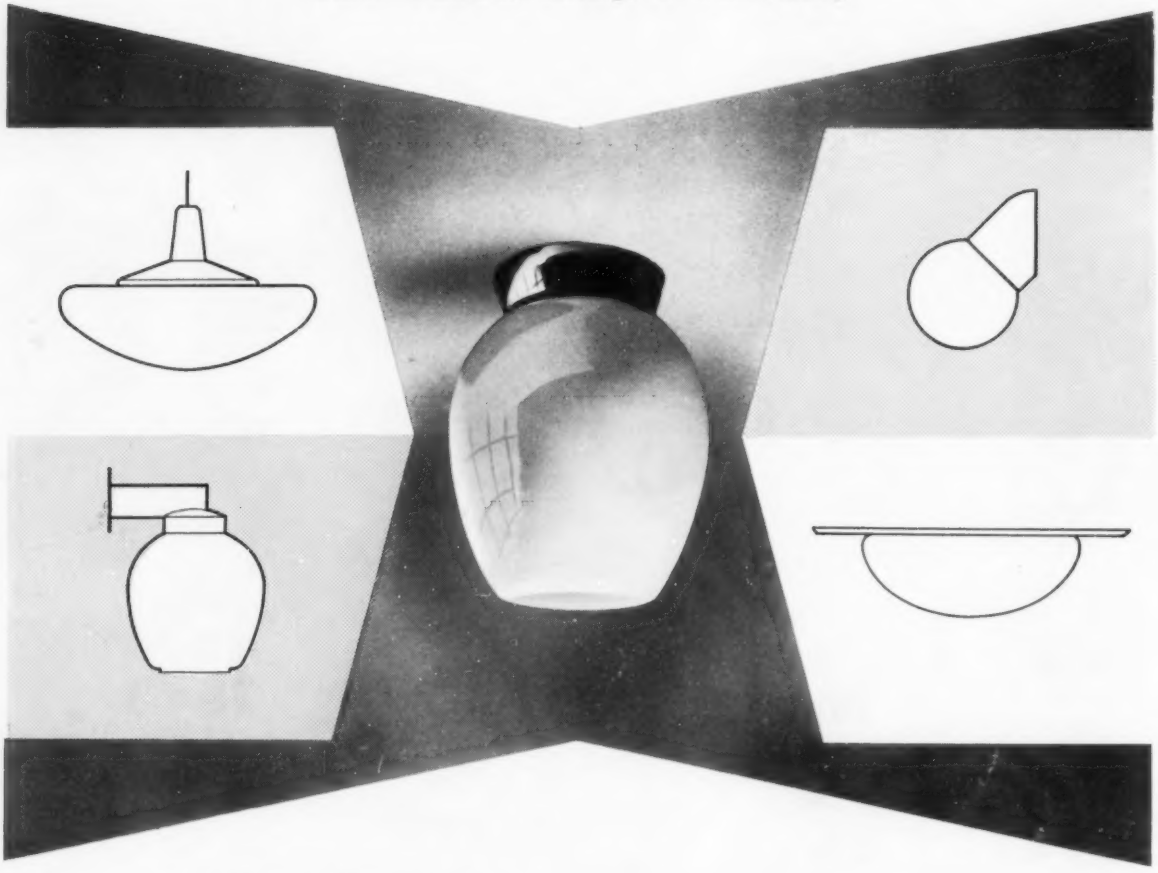

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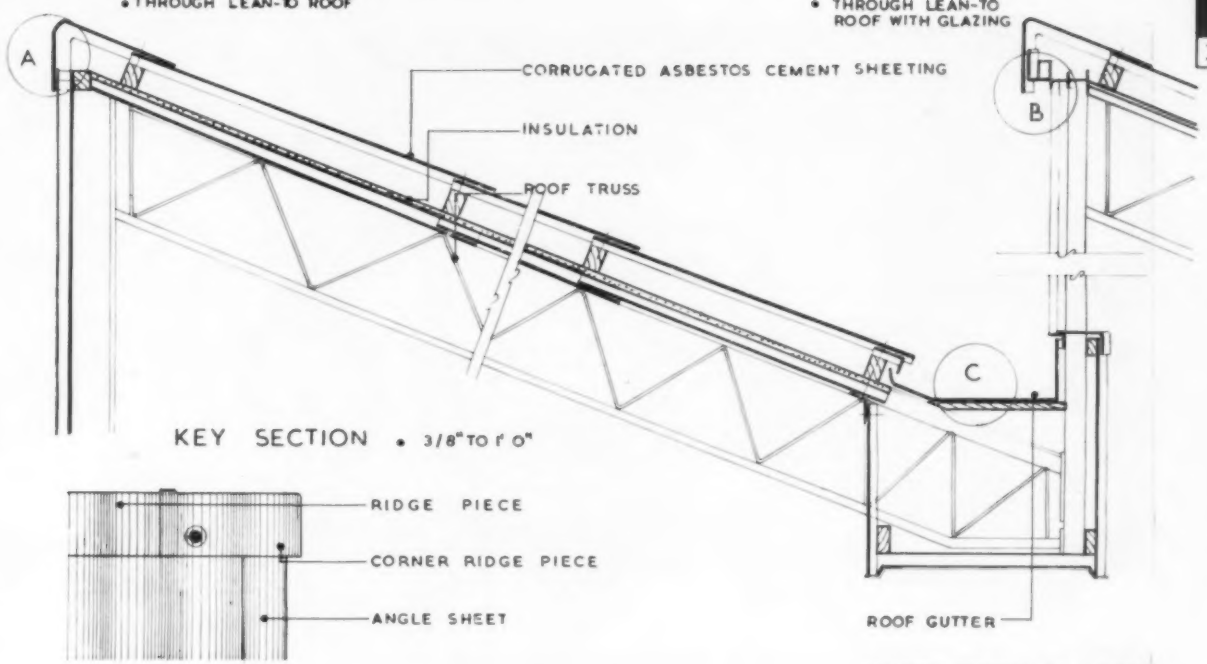
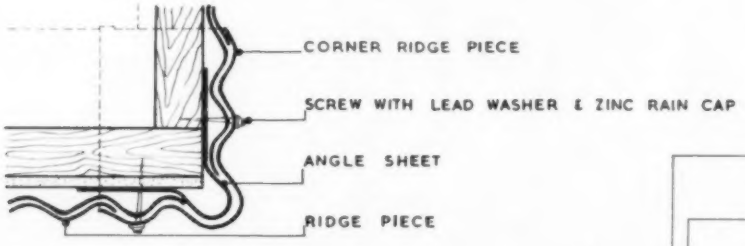
• THROUGH LEAN-TO ROOF

• THROUGH LEAN-TO ROOF WITH GLAZING



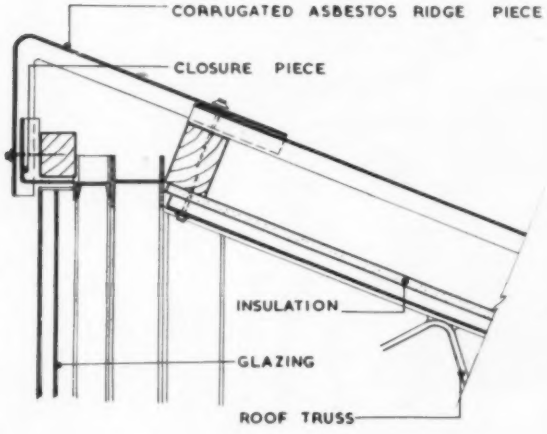
KEY SECTION • 3/8" TO 1' 0"

ELEVATION OF CORNER

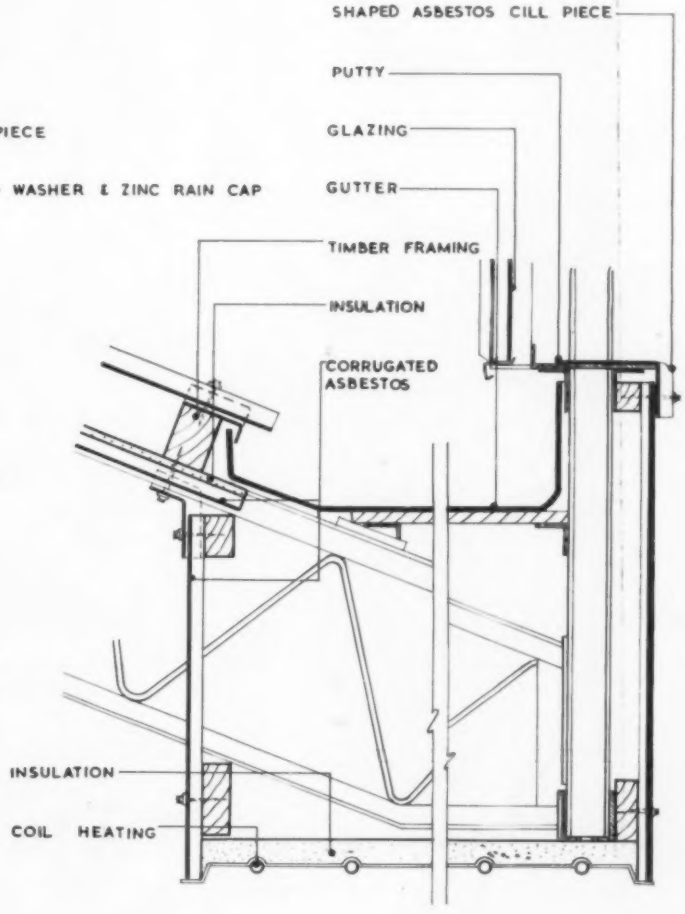


CORNER DETAIL AT (A)

PLAN • 3/4" TO 1' 0"



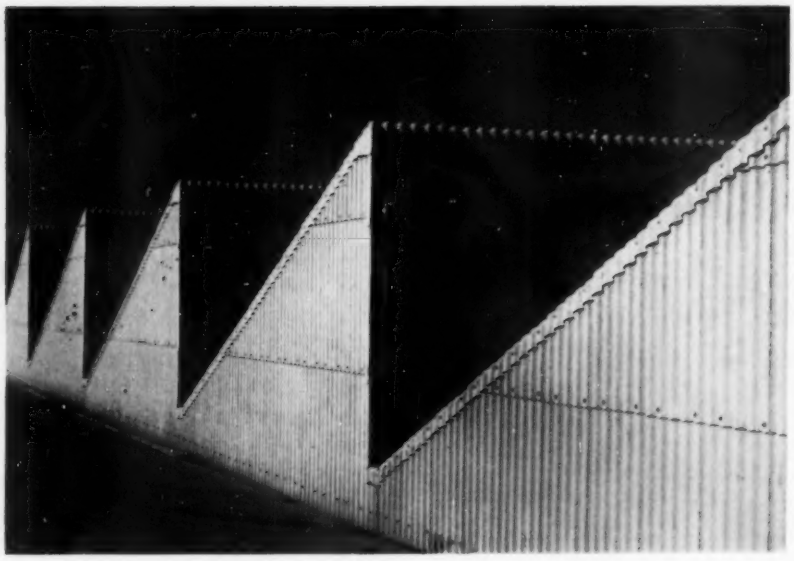
DETAIL AT (B) • 3/4" TO 1' 0"



DETAIL AT (C) • 3/4" TO 1' 0"

ROOF DETAIL. FACTORY. LEIMEN. GERMANY • ERNST NEUFERT

G★



ROOF DETAIL, FACTORY, LEIMEN, GERMANY

ARCHITECT: ERNST NEUFERT

FILLEX

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(ready mixed)

1. Applications of Fillex to tiled suface

Here is a NEW general purpose filling compound, designed specially for the decorator.

FILLEX, which is supplied in ready-for-use paste form, can be used for filling in cracks in plaster and for skimming rough surfaces. It is suitable for most surfaces other than wood or metal.

FILLEX

- **is suitable for INSIDE and OUTSIDE work.**
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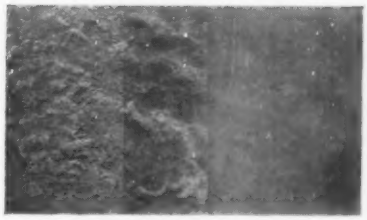
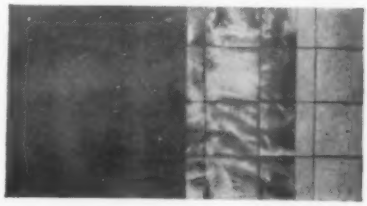
- **has excellent keeping qualities (but should be protected from frost)**
- **is supplied in 4 lb. and 16 lb. tins.**

PRICE : 4 lb. tins at 1/6 per lb.
16 lb. tins at 1/3 per lb.



2. Fillex being applied over brickwork



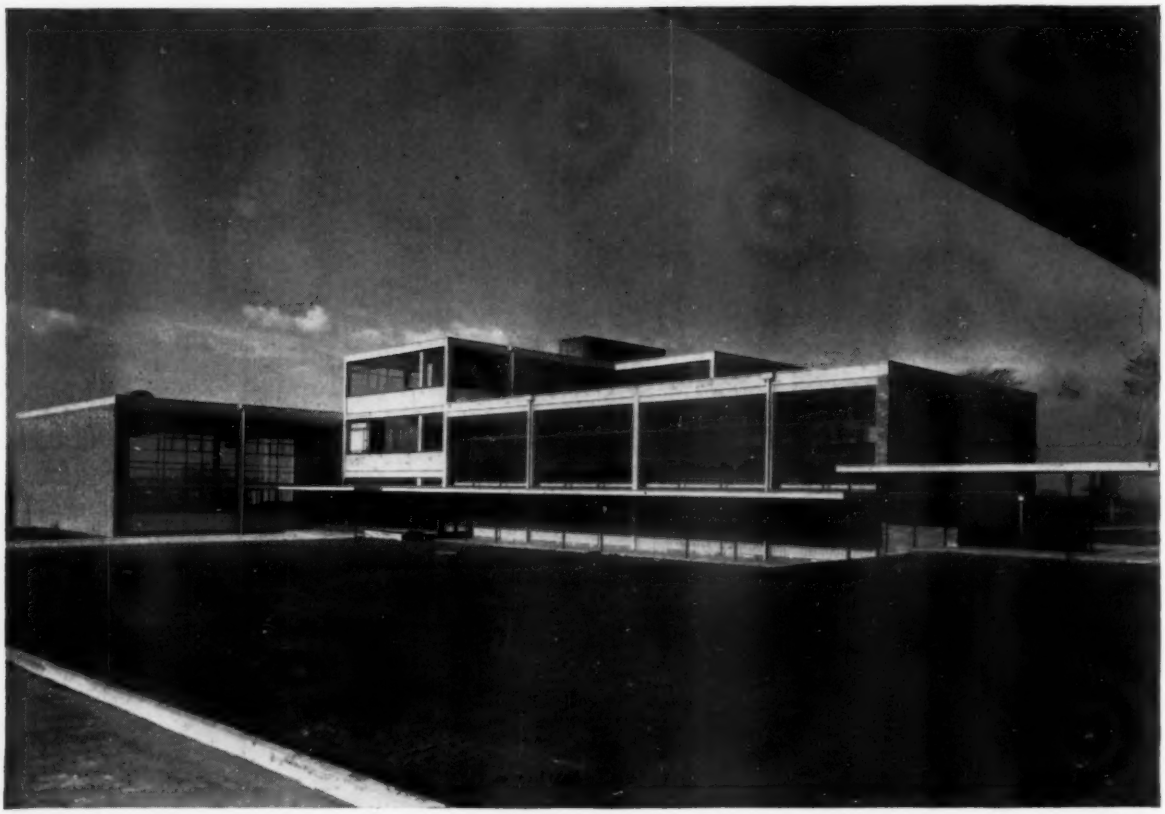
3. Fillex being applied over textured paint surface

After **FILLEX** *finish off with..*

DOCKERLUX
The finest Gloss Paint in the world

or **VYDOK**
The perfect Emulsion Paint in matt and eggshell finishes

DOCKER BROTHERS *LADYWOOD, BIRMINGHAM 16 · LONDON SHOWROOMS 17 BERNERS STREET W.1.*



Consulting Engineers: Messrs. Clarke, Nichols and Marcel.

Architect: J. Nelson Meredith, Esq., F.R.I.B.A., City Architect.
Quantity Surveyors: Messrs. Gleeds.

Lockleaze Secondary Modern School for the City and County of Bristol

The contract for this Secondary Modern School was carried out by the Bristol Division of Cubitts' Structural Engineering Department. Early completion of the contract enabled the 450 pupils to occupy the school a term ahead of schedule. Precast concrete columns made on site comprise the frame which carries lattice steel beams, hollow tile floors and roofs. Prestressed concrete floor joists are incorporated throughout. End walls are of brickwork, and breast walls of aluminium sheeting on timber studding, insulated and lined internally.

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Covering the 'Jack' with...

"EVERITE" Asbestos-Cement "BIGSIX" CORRUGATED SHEETS

"TURNALL" Asbestos-Cement TRAFFORD TILES

"TURNALL" ASBESTOS INSULATION BOARD

The above illustration shows "TURNALL" Asbestos-Cement Trafford Tiles used on roof of Bowls Pavilion, Knowle Road, Bexhill-on-Sea.

"EVERITE" Asbestos-Cement 'BIGSIX' Sheets are used as side cladding together with "EVERITE" Asbestos-Cement Box Gutter at eaves, complete with Rainwater Pipes.

The interior illustration shows "TURNALL" Asbestos Insulation Board used as wall and ceiling lining.

Architect : Kenneth G. Higgs, A.R.I.B.A. Bexhill-on-Sea

Structural Steelwork : The Coseley Engineering Co. Ltd., Wolverhampton.

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A MEMBER OF THE TURNER & NEWALL ORGANISATION

TRAFFORD PARK MANCHESTER 17

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and public buildings, buildings of
importance intended to withstand the passage
of years with dignity and solidity.
Such structures inspire confidence, for
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on the cement with which it is made,
has always been a

symbol of stability

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DATE OF ISSUE 5 APRIL, 1956

CONTRACT • NEWS •

*Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate : (a) type of work (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading (c) deposit (d) last date of application (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.*

OPEN

BUILDING

BIRKENHEAD B.C. (a) Erection of a caretaker's house and demolition of existing lodge, at Rock Ferry High School, Highfield South. (b) Borough Architect, 3 Conway Street. (c) 1gn. (e) April 16.

BOSTON R.C. (a) Erection of 2 bungalows at Upsall Road, Butterwick, 2 bungalows and 2 houses at Meredian Road, Fishtoft, 6 bungalows at Church Road, Frieston, 2 bungalows at Lacey's Avenue, Leverton, 2 bungalows at The Park, Sutterton, and 12 bungalows at Dennis estate, Kirton. (b) W. R. Beardall, Council Offices, 126 London Road. (e) April 14.

BOURNEMOUTH B.C. (a) Erection of (1) Contract W.H. 12A. 2 blocks of 6 terrace houses, (2) Contract W.H. 12B. 2 blocks of 6 terrace houses, (3) Contract W.H. 12C. 2 blocks of 6 terrace houses, (4) Contract W.H. 18B. 3 blocks of 6 terrace houses, (5) Contract W.H. 8. 2 blocks of 4 flats, and (6) Contract W.H. 8A. 2 blocks of 4 flats, on the West Howe estate. (b) Borough Architect, Room 106, Town Hall. (c) 2gns each contract. (e) April 17.

BRISTOL C.C. (a) Erection and site works of school kitchen and dining room at Southville. (b) City Architect, The Council House, College Green. (c) 2gns. (d) April 16.

CRANBROOK R.C. (a) Erection of 10 houses and 2 bungalows, together with drainage, services, siteworks and offsite sewage treatment works, at Parsonage Farm site, Frittenden. (b) Council's Architect, Council Offices, Hill House. (c) 2gns by cheque, payable to Council. (e) April 19.

DEBEN R.C. (a) Erection of 1 pair of houses and incidental works at Tuddenham. (b) Council's Surveyor, Council Offices, Melton Hill, Woodbridge. (c) 2gns. (e) April 12.

HADLEIGH U.C. (a) Erection of 96 houses, construction of roads, sewers, watermains, on the Bradfield site, No. 2. (b) Council's Clerk, Council Offices, 32 High Street, West Suffolk. (d) April 12.

HALESOWEN B.C. (a) Erection of a brick-built pavilion with asbestos cement sheet roofing, at the Grove Recreation Ground, Stourbridge Road. (b) Borough Engineer, Council House. (c) 2gns. (e) April 16th.

LONDON—EALING B.C. (a) Erection of one block of 12 three-storey flats, together with site works in Greenford Road, Greenford. (b) Borough Surveyor, Town Hall, Ealing. (c) £2. (e) April 27th.

MANCHESTER C.C. Contract No. 15. (a) Erection of 3 police houses at Clarence Road, Longsight. (b) Director of Housing, Town Hall. (e) April 13th.

N. IRELAND—ANTRIM. (a) Erection of new sanitary accommodation, and renovation of classrooms at Farinflough primary school, Farinflough, Randalstown. (b) Messrs. Houston and Beaumont, 41 Donegall Place, Belfast. (c) 3gns. (e) April 13th.

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Postal tuition in History, Testimonies, Design, Calculations, Materials, Construction, Structures, Hygiene, Specification, Professional Practice, etc. Also in general educational subjects.
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It doesn't. Many think you pay for a name. That may be true of some, but certainly not of us.
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And fight the Fire Fiend without NU-SWIFT? But why? Even the Royal Navy don't do that. Please send us details of your wonderfully rapid and reliable Fire Extinguishers—
BEFORE IT IS TOO LATE!
Name.....
Address.....
Post NOW to Nu-Swift Ltd. 25 Piccadilly W.1.
In Every Ship of the Royal Navy

N. IRELAND — BELFAST C.C. (a) Erection of a girls' secondary intermediate school for 840 pupils at Orangefield, Castlereagh Road. (b) Education Architect's Department, 40 Academy Street. (c) £5. (e) May 3.

N. IRELAND—CO. DOWN. (a) Erection and completion of a new voluntary intermediate school at Castlewellan. (b) P. J. Davidson, 16 High Street. (c) 5gns. (e) April 27.

N. IRELAND — GOVERNMENT OF NORTHERN IRELAND. (a) Erection of a public service vehicles examination centre at Lisburn, Co. Antrim. (b) Ministry of Finance (Room 103), Law Courts Building, May Street, Belfast. (c) £2. (e) April 18.

N. IRELAND — NORTHERN IRELAND HOSPITALS AUTHORITY. (a) Erection of recreation and teaching accommodation, comprising one 1-storey building and ancillary works, at N.I. Fever Hospital. (b) Messrs. W. H. Stephens and Sons, 13 Donegall Square North, Belfast. (c) 5gns. (e) April 19.

N. IRELAND — NORTH DOWN WATERWORKS JOINT BOARD. (a) Erection of a house at Ballycloughan, nr. Saintfield. (b) Board's Engineer, 2 Glenford Place, Newtownards. (c) 2gns. (e) April 17.

SCOTLAND — DUNFERMLINE. (a) Erection of 115 houses at Aberdour Road. All or separate trades. (b) Scottish Special Housing Association Ltd., 15-21 Palmerston Place, Edinburgh, 12.

SCOTLAND—JOHNSTONE. (a) Erection of 20 houses at Beith Road. All or separate trades. (b) Scottish Special Housing Association Ltd., 15-21 Palmerston Place, Edinburgh, 12.

SCOTLAND—PERTH AND KINROSS JOINT C.C. (a) Erection of a new senior secondary school at Blairgowrie. (b) County Architect, New Schools Section, Old Academy Buildings, Rose Terrace, Perth. (d) April 7.

STOCKSBRIDGE U.C. (a) Erection of 16 flats in blocks of 4, at Mill Lane, Wortley Road, Deepcar, nr. Sheffield (b) Council's Surveyor, Town Hall. (e) April 23.

TYNE IMPROVEMENT COMMISSION. (a) Erection of (1) welfare facilities and mess room, at Tyne Dock and (2) extension to fitting shop at Tyne Dock. (b) General Manager, Tyne Improvement Commission, Bewick Street, Newcastle-upon-Tyne, 1. (c) 2gns. (d) April 9. (e) May 7.

WALLASEY B.C. (a) Erection of 118 dwellings, at Site P.6, Moreton. (b) Borough Architect, Town Hall.

WEST RIDING OF YORKSHIRE C.C. (a) Renewal of slating and leadwork, etc., to part of the stables block roof at Lady Mabel College of Physical Education, Wentworth Woodhouse, nr. Rotherham. (b) County Architect, Bishopgarth, Westfield Road, Wakefield. (c) 2gns. (e) April 16.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

CROYDON B.C. (1) Blocks of 7 and 11 storey flats. (2) Old Town and Duppas Hill Terrace. (3) Wates Ltd., 1258 London Road, London, S.W.16. (4) £203,325.

WATFORD CORPORATION. (1) 461 houses, etc. (2) Meriden Estate. (3) Carlton Contractors Ltd., Rochester Way, London, S.E.9. (4) £701,000.

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A REVOLUTIONARY NEW INSTRUMENT FOR LAYING OUT RIGHT-ANGLES . . .

The Sitesquare, an optical instrument, designed by the makers of the famous Cowley Level, is indispensable for Builders, Architects, Fencing Contractors, Groundsmen and many others who lay out or check right-angles. It replaces the 3-4-5 method and the wooden square. It can also be used to check verticality.

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Canvas Holdall . £2.0.0

* QUICK
Instrument erected in 1 minute, angle set out in less than two minutes.

* SIMPLE
Instrument can be mastered by an unskilled man in about 5 minutes.

* RELIABLE
The range is over 100 feet. An angle can be laid out to 1" accuracy in 100 feet.

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Non-absorbent Paint

Surface for Soft

Board

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One gallon covers approximately 30 square yards.
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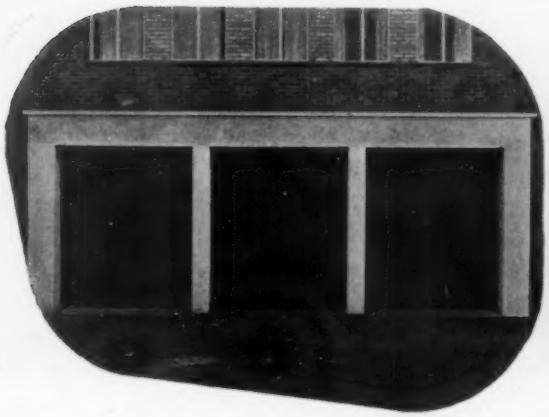

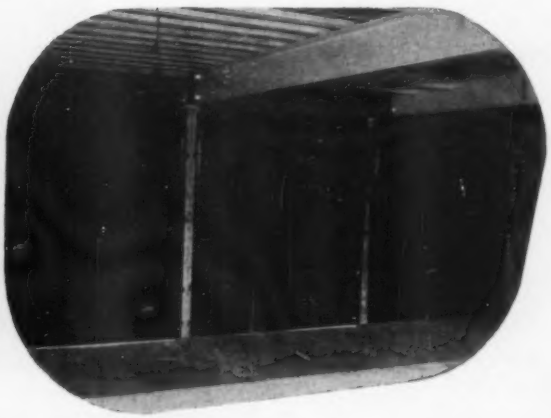

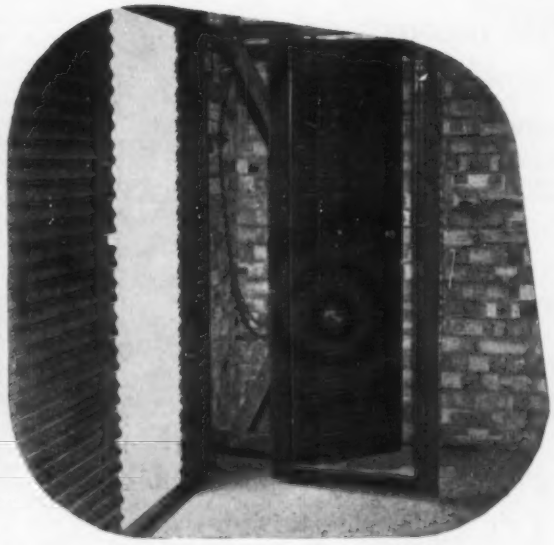

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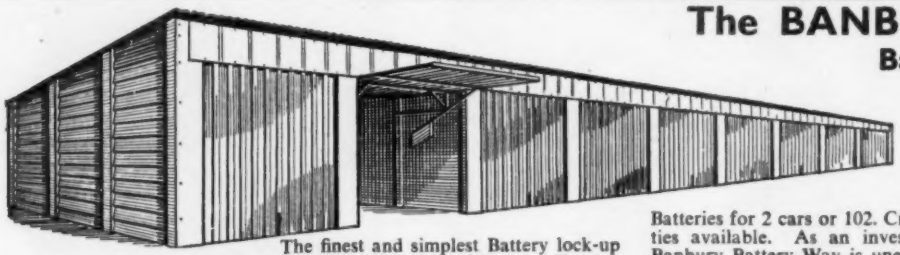

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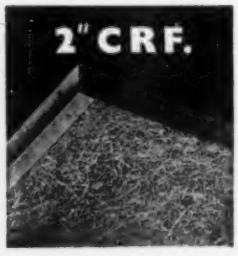
EVERY Architect knows that roofs, in most cases the largest single continuous surface in a building, demand the most careful attention. In the past, the Architect chose the roof structure and would frequently have to conceal its unsightly appearance from within. Although this great sound reflecting surface also provided the easiest path for heat losses, *additional* cost made the use of thermal insulators or sound absorbants a luxury.



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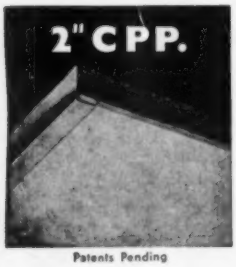

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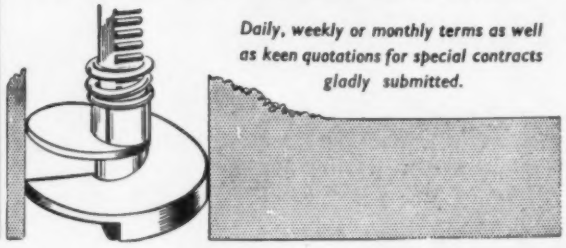

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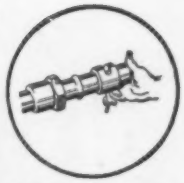
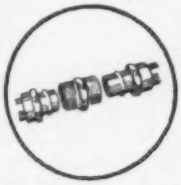
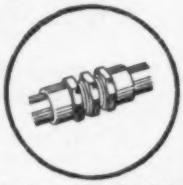


● Swage or circular ridge made with fool-proof tool.



● The fitting seats itself against the swages producing 100% efficient joint.



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LOOK at the cross section—metal to metal joints with no loose rings, cones or ferrules, self-seating by means of swage or circular ridge—DOUBLE GRIP CANNOT SLIP !

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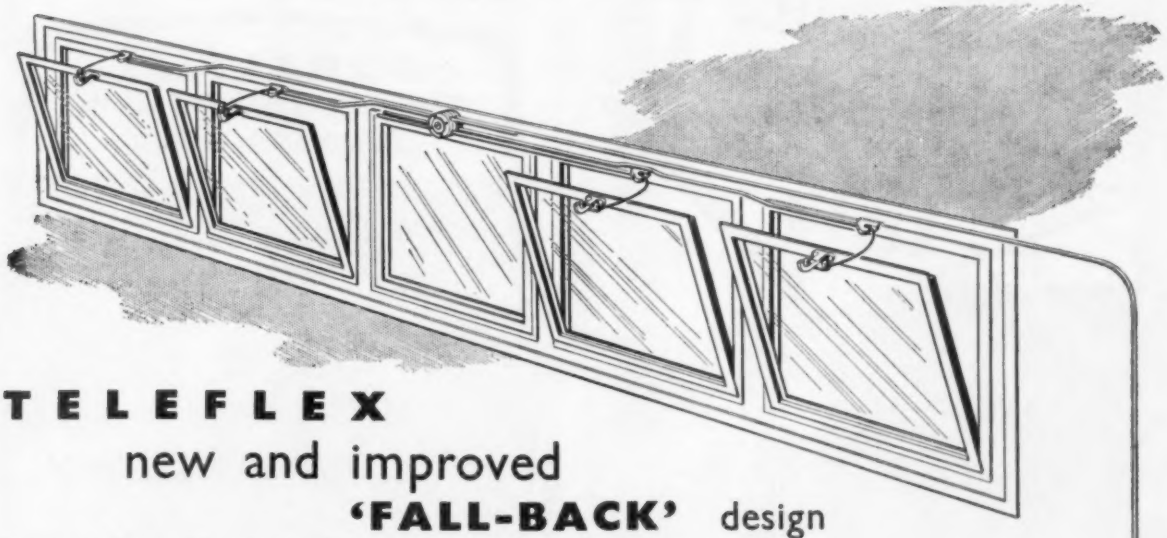

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We should be glad to send you further details promptly on request.

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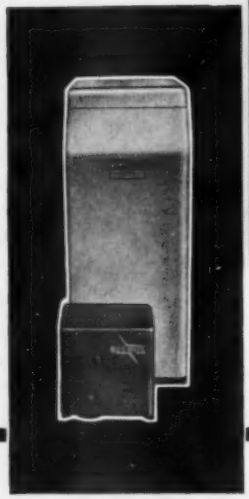

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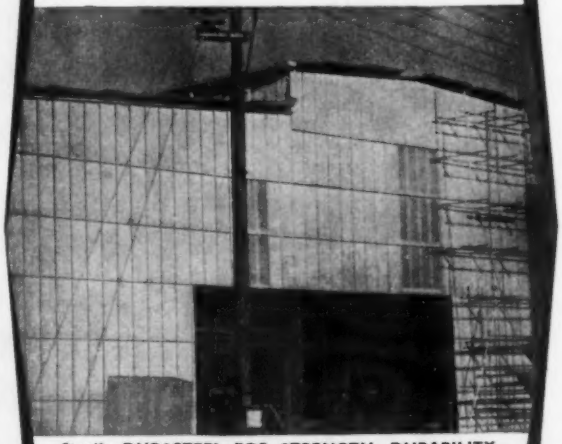

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The only paint of its kind in the world

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This is typical of many requests received by us and appears to be the result of a misunderstanding brought about by the very success of DENTOLITE as a germicidal and fungicidal finish.

Actually, DENTOLITE *is* the best quality P.V.A. Emulsion Paint it is possible to produce. It is non-poisonous, free from odour, scrubbable and dries with a beautiful satin sheen. ONE COAT OVER ANY SIMILAR COLOUR GIVES FIRST-CLASS OBLITERATION.

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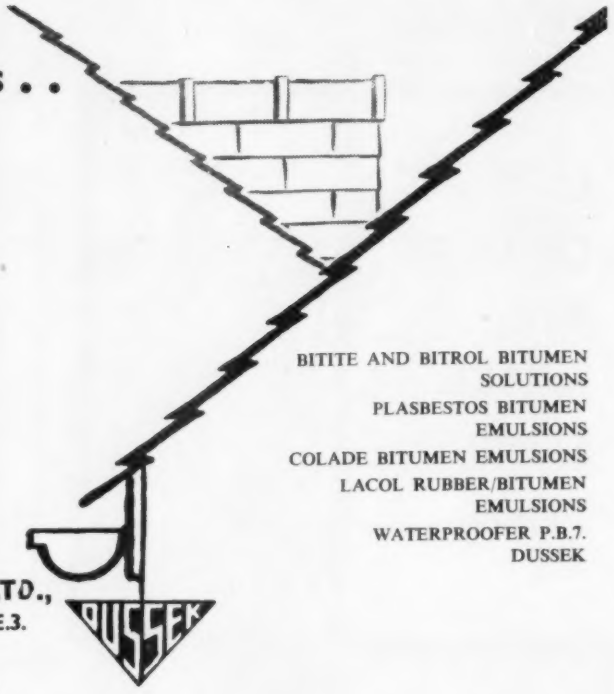
In the sealing and waterproofing of roofs . .



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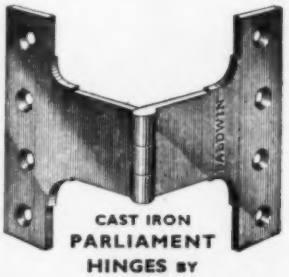

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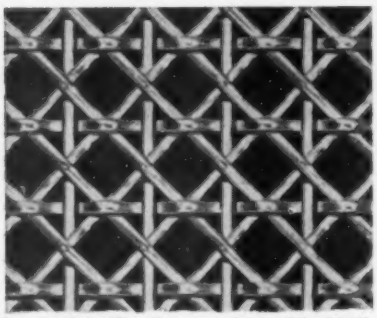
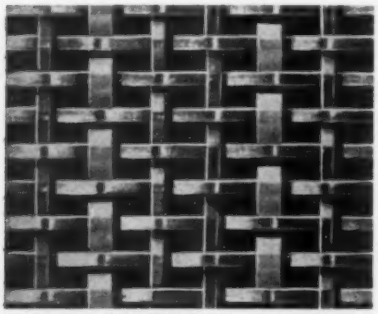


METALACE (Pattern No. M 1006) Produced in rolls of 25ft. to 100 ft. × 2ft. 11in. wide. Please ask for List No. A 875.



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For effective screening whilst allowing a free circulation of air, Harveys make a group of products which ensure harmony with any decorative scheme. The patterns illustrated are representative of three comprehensive ranges, available in a variety of metals and finishes.

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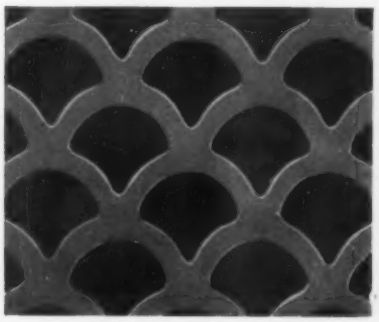

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PERFORATED PLASTICS can also be supplied. Please ask for List No. A 355.

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CAMBRIDGESHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

APPLICATIONS are invited for the following appointments:—

(a) Two Quantity Surveyors Grade V (£795/35/£970)

(b) One Assistant Quantity Surveyor Grade II (£595/20/£675)

(c) One Engineer Grade IV/V (£710/35/£970)

(d) Two Architectural Assistants Grade III (£640/25/£765)

For appointment (a) applicants should be thoroughly experienced in the preparation of Estimates, Bills of Quantities, Specification and settlement of final accounts, and should be Associate Members of the R.I.C.S. and for—

(b) Applicants should have had experience in Abstracting, Billing and site measurement. Preference will be given to applicants who have passed the intermediate stage of the R.I.C.S.

(c) Applicants should be associate members of the Institute of Heating and Ventilating Engineers or hold equivalent qualifications, and should have had experience in the design, specification and supervision of contracts for heating, ventilating and lighting services in large buildings.

(d) Applicants should be Registered Architects, and preference will be given to members of the R.I.B.A. They should have experience in the design and construction of public buildings, housing and modern schools; the preparation of specifications and of site supervision.

The appointments are subject to the Local Government Superannuation Acts, 1937 to 1953, the National Scheme of Conditions of Service, a satisfactory medical examination and termination by one month's notice on either side.

Application, stating age, present salary, present and previous appointments, details of training and experience, together with one recent testimonial and the names and addresses of two referees, should be submitted to the undersigned not later than April 18th, 1956.

CHARLES PHYTHIAN,
Clerk of the Council.

Shire Hall,
CAMBRIDGE. [2157

CUMBERNAULD DEVELOPMENT CORPORATION.

APPOINTMENT OF CHIEF ARCHITECT AND PLANNING OFFICER.

APPLICATIONS are invited for the post of Chief Architect and Planning Officer to the Cumbernauld Development Corporation. The functions of the post include the direction of the architectural and planning departments of the Corporation and advising the Corporation on the planning of the new town and the design and execution of development projects carried out by the Corporation. Candidates should be Corporate Members of the Royal Institute of British Architects and of the Town Planning Institute and should, in particular, be familiar with the latest developments in planning standards and technique appropriate to the development of a new town.

The salary range for this appointment will be £1,800 - £2,300 and the initial salary payable will depend upon the qualifications and experience of the successful applicant.

The post will be superannuable under the Local Government (Scotland) Act, 1937 and the Local Government Superannuation Act, 1953.

Canvassing, directly or indirectly, of the members of the Development Corporation will constitute an absolute disqualification.

Applications, containing full details of the candidate's age, qualifications and experience, together with the names and addresses of referees, should be submitted in six copies to the undersigned not later than 19th April, 1956. Envelopes should be marked "Chief Architect".

There is no prescribed form of application.

The Chairman,
Cumbernauld Development Corporation,
c/o Dunbarton County Council,
24 George Square,
Glasgow. [2133

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

VACANCIES for Architects, Grade III (up to £987), and Architectural Assistants (up to £818), for widespread construction programme which includes houses, blocks of flats, schools of all types, and various public and industrial buildings.—Application forms and particulars from Architect, (AR/EK/A/3), The County Hall, S.E.1. (1189.) [0006

BOROUGH OF MITCHAM

APPOINTMENT OF ASSISTANT TO THE BUILDING INSPECTOR

APPLICATIONS are invited for the appointment of Assistant to the Building Inspector.

The appointment is to the General or Higher General Division of the National Scale of Salaries, dependent upon educational qualifications, i.e. £330 (age 22) x £15's to £420 per annum or £350 (age 22) x £25's to £500 per annum plus London Weighting, but candidates not possessing educational qualifications may progress by experience to the Higher General Division. Further advancement can be promised to an officer of proved ability after satisfactory service.

Candidates should be 21-26 years of age and possess a knowledge of building construction. Experience with a local authority will be an advantage.

Further details and particulars may be obtained from the Deputy Borough Engineer and Surveyor, Town Hall, Mitcham, to whom applications are to be forwarded not later than 12 noon on Saturday, April 14th, endorsed "Appointment of Assistant to the Building Inspector".

R. H. WHITE,
Town Clerk.

Town Hall,
Mitcham, Surrey.
March 29th, 1956. [2180

GOVERNMENT OF NORTHERN NIGERIA

ARCHITECT — PUBLIC WORKS DEPARTMENT

TO prepare sketch plans, working drawings and detailed specifications for various types of buildings and carry out the general work of a busy Architectural Office.

Appointment on contract for one tour of 18-24 months; possibility of permanent establishment. Salary scale £1,008 - £1,824 p.a.; gratuity £150 p.a. on satisfactory completion of contract.

Free passages for officer and up to maximum of 2 adult passages for wife and children. Allowances of £72 to £120 p.a. payable for maximum of 3 children under 18 years. Government quarters, if available, provided at rental of 8½% of basic salary. 7 days' leave for each month of resident service.

Candidates should be A.R.I.B.A. with wide general experience.

Apply in writing to the Director of Recruitment, Colonial Office, London, S.W.1, giving briefly age, qualifications and experience and quoting reference number BCD.112/408/07. [2176

LONDON COUNTY COUNCIL

requires:—

LANDSCAPE ARCHITECTURAL ASSISTANTS for preparation of schemes, working drawings, schedules, specifications and supervision of contract work for the layout of new parks and open spaces, playing fields and grounds to new schools.

Salaries up to £817 16s. a year according to qualifications and experience.

Application forms from Chief Officer of the Parks Department, Old County Hall, Spring Gardens, S.W.1 (WHItehall 3121 Ext. 33). (569). [2182

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

VACANCIES exist for ARCHITECT/PLANNERS (salaries up to £817). Tasks include three dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.

The work includes the preparation of comprehensive layouts covering all the important areas of new public and private development throughout the County, and covers the whole field of planning technique.

Particulars and application form, returnable by April 23rd, from Architect (AR/EK/ATP/2), County Hall, S.E.1. (579). [21881

NORWICH EDUCATION COMMITTEE

THE NORWICH CITY COLLEGE AND ART SCHOOL.

IPSWICH ROAD, NORWICH.

Principal: Frank Briers, B.Sc., D.Phil.(Oxon), F.R.I.C.

WANTED for September 1st, 1956, TEACHER OF GENERAL BUILDING SUBJECTS. Ability to teach Craft Theory in one craft or Structural Calculations to Intermediate R.I.B.A. would be an additional recommendation.

Salary in accordance with the Burnham Technical Scale, Grade A.

Application forms, which may be obtained from the Director of Education, City Hall, Norwich, on receipt of a stamped addressed envelope should be returned to the Principal within fourteen days from the date of this advertisement. [2174

THE UNIVERSITY OF LIVERPOOL.

APPLICATIONS are invited for a Leverhulme postgraduate Fellowship in the School of Architecture or the Department of Civic Design. The Fellowship will be tenable for one year at a value of £500, but may be renewed for a second year at a value of £550.

Applications, in envelope marked "Leverhulme Fellowship in Architecture or Civic Design", stating age, qualifications and experience and proposed field of research together with the names of two referees, and enclosing copies or photographs of work, should be received not later than 21st April, 1956, by the undersigned, from whom further particulars of the conditions of award may be obtained.

STANLEY DUMBELL.
Registrar. [2173

BOROUGH OF BURY ST. EDMUNDS

APPOINTMENT OF ASSISTANT ARCHITECT—GRADE A.P.T. IV.

APPLICATIONS are invited for the above superannuable post in the Department of the Borough Engineer and Surveyor at a salary within Grade A.P.T. IV (£710 - £885). Duties will include the design of new houses and other buildings; the supervision of a Direct Labour Organisation constructing Council Houses; and the maintenance and upkeep of other Corporate Property. Consideration will be given to the provision of housing.

Applications endorsed "Assistant Architect" and stating age, whether married, qualifications and experience, together with names of three referees, to be delivered to the Borough Engineer and Surveyor at the address below not later than Friday, 13th April, 1956.

RICHARD R. HILES.
Town Clerk.

Borough Offices,
BURY ST. EDMUNDS. [2172

COUNTY BOROUGH OF WEST HAM

BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT

APPLICATIONS are invited from suitably qualified and experienced Architects and Architect/Planners for vacancies on the permanent establishment, as under:—

(a) SENIOR ASSISTANT ARCHITECTS—V (£795 x £35 — £970)

(b) SENIOR ASSISTANT ARCHITECTS—IV (£710 x £35 — £885)

(c) ARCHITECTURAL ASSISTANT—I/II (£530 x £20 — £675)

(d) SENIOR ASSISTANT, PLANNING—V (£795 x £35 — £970)

(e) SENIOR ASSISTANT, PLANNING—IV (£710 x £35 — £885)

(f) PLANNING ASSISTANT—I/II (£530 x £20 — £675)

London Allowance in addition.

The County Borough has an extensive reconstruction and slum clearance programme, and offers interesting work to Architects and Planners.

Application forms and details from the Borough Architect and Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., Dist. T.P., M.T.P.I., 70, West Ham Lane, Stratford, E.15 (returnable by 21st April, 1956). [2160

RUTLAND COUNTY COUNCIL

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

A.P.T. GRADE III. SALARY £640 - £765

APPLICATIONS are invited for the appointment of an Architectural Assistant in the office of T. Brian Kennedy, A.R.I.B.A., M.T.P.I., County Architect and Planning Officer.

Preference will be given to applicants who are Associates of the Royal Institute of British Architects and who have had experience in the design of schools.

The appointment is subject to the Local Government Superanuation Acts 1937 to 1953, the National Scheme of Conditions of Service, a satisfactory medical examination and termination by a month's notice on either side.

Applications stating age, present salary, present and previous appointments, details of training and experience together with names of two referees should be submitted to the undersigned endorsed "Architectural Assistant" within 14 days of the appearance of this advertisement.

A. BOND,
Clerk of the County Council.

County Offices, Oakham.
26th March, 1956. [2186

BASILDON DEVELOPMENT CORPORATION

DEPARTMENT OF ARCHITECTURE AND PLANNING

require

(a) ARCHITECT, GRADE III (£975 - £1,275)
(b) ASSISTANT ARCHITECT, GRADE IVb (£845 - £960)
(c) ASSISTANT ARCHITECT, GRADE IVa (£715 - £845)
(d) ASSISTANT PLANNER, GRADE IVa (£715 - £845)
ASSISTANT PLANNER, GRADE Vb (£580 - £650)

Architects (posts a, b and c) may work on Town Centre, Housing or Industrial projects and must have experience and ability in contemporary design of buildings in one of these categories, together with preparation working drawings and supervision of contracts. Architect (post a) will control a Group and must have experience all stages contract management and ability to lead a team. Planners will assist in implementation of Master Plan and must have experience in planning design and survey. Building programme £3,000,000 annually. Excellent scope initiative and drive. Professional qualification and medical examination required. Appointments superannuable. Housing available for renting in approved cases.

Applications on special form obtainable from Chief Architect, to General Manager, Gifford House, Basildon, Essex, endorsed with the relevant appointment, within 21 days of appearance of advertisement. [2189

LONDON ELECTRICITY BOARD

ASSISTANT QUANTITY SURVEYOR

APPLICATIONS are invited for the above position in the Construction Branch of the Chief Engineer's Department in Central London.

Applicants should be experienced in the preparation of Bills of Quantities in all their stages, measurement of variations and re-measurement of contracts, and the successful candidate will work under the direction of a Chartered Quantity Surveyor.

The post is graded under Schedule 'C' of the National Joint Board agreement as Grade 4 — £787 10s. per annum rising to £1,023 15s. per annum, inclusive of London Allowance.

Application forms obtainable from Personnel Officer, 46, New Broad Street, London, E.C.2. Please quote ref: PER/V/2164/AA. [2191

CITY AND COUNTY OF THE CITY OF EXETER

APPLICATIONS are invited for the appointment of Senior Assistant Architect on the establishment of the City Architect's Department; salary range between £690 and £885 per annum, according to experience.

Applicants must be Associate Members of the R.I.B.A. or hold equivalent qualifications, and preference will be given to those experienced in the design and construction of schools and civic buildings.

The appointment will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Acts 1937-1953. The successful applicant will be required to pass a medical examination.

Canvassing will disqualify, and applicants must disclose whether, to their knowledge, they are related to any member of the Council or to the holder of any senior office under the Council.

Applications stating age, qualifications, previous and present appointments and salaries, full details of experience and the earliest possible date when available, should be sent to H. B. Rowe, F.R.I.B.A., A.M.I.Struct.E., City Architect, Municipal Offices, Exeter, within fourteen days of the publication of this advertisement.

C. J. NEWMAN,
Town Clerk.

Exeter,
March, 1956.
[2192

COUNTY COUNCIL OF ESSEX

COUNTY PLANNING DEPARTMENT

APPLICATIONS are invited for the following superannuable posts:—

(a) SENIOR PLANNING ASSISTANT in Survey and Development Plan Section, A.P.T. IV (£710 - £885 plus London Weighting) at Wanstead. Should be Corporate Member of Town Planning Institute or other comparable professional Institute.
(b) PLANNING ASSISTANT, A.P.T. III (£640 - £765) at Broomfield. Should have wide experience in the administration of development control.
(c) PLANNING ASSISTANT in Survey and Development Plan Section, A.P.T. I (£530 - £610) at Epping.
(d) DRAUGHTSMAN M.D. II-IV (£395 - £575) at Broomfield and at Wanstead (plus London Weighting).

Application forms from County Planning Adviser, Broomfield Place, Broomfield, Chelmsford, returnable by 18th April, 1956. Canvassing disqualifies. [2193

HERTFORDSHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

APPLICATIONS invited for appointment of Chief Assistant Architect (Section Leader). Salary, Grade A £1,063 15s. - £1,228 15s. Commencing salary to be fixed in accordance with qualifications and experience.

Previous Local Government experience not essential. — Applications giving detailed particulars of experience, qualifications, etc., and names of three referees to County Architect, County Hall, Hertford, Herts., within ten days of the appearance of this advertisement. [2187

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HENRY BUTCHER & CO., 73, Chancery Lane, London, W.C.2. (HOLBORN 8411); or
GEERING & COLYER, Bank Chambers, Ashford, Kent. (ASHFORD 25).
[2190

EXAMINATIONS

F.A.S.

FORTHCOMING EXAMINATIONS

THE Faculty of Architects and Surveyors will be holding professional examinations from 28th May to the 1st June, 1956 (inclusive) in the Intermediate and Final grades of the Building and Quantity Surveyors Sections.

The examinations will be held in London and certain provincial centres. Applications from candidates for permission to sit must be with the Secretary not later than 30th April, 1956.

All information obtainable from the Secretary, S.A.S., 68 Gloucester Place, London, W.1. (WELbeck 9966). [2179

ARCHITECTURAL APPOINTMENTS VACANT—contd.

ARCHITECTURAL Assistant of inter standard required for London Office. Varied and interesting work in connection with industrial and commercial schemes. The vacancy offers good opportunity and scope for the right man. Good salary. 5-day week. Full particulars of experience to — Box 0943, c/o A. & B. N. [2184

MALE or Female Assistants, Inter Standard, with office experience. £600 p.a. 5-day week. Luncheon vouchers. Work mainly commercial.—Ring GERrard 1857. [2178

ARCHITECTURAL Assistants with some previous office experience required for London and Midlands offices.—Write or telephone, giving full particulars, including age and salary, to Hasker & Hall, 13, Welbeck Street, W.1. (Welbeck 0061). [2177

ARCHITECT to large furnishing combine requires young assistant (age 18-24) prepared to work on own initiative. Work covers alterations to existing properties and new commercial buildings. Occasional travelling involved.—Write giving full particulars to Box 0752, c/o A. & B. N. [2140

ARCHITECTURAL Assistant required in London by a firm of City Architects for work on modern office buildings.—Please telephone CENtral 7748. [2185

ASSISTANT Architects required in Central London office. Knowledge of store construction an asset but not essential, providing the applicant has good all-round experience. Possibilities of future partnership not entirely ruled out for the right type of man.—Write Box No. 0958, c/o A. & B. N., stating age, experience and salary required. [2188

ASSISTANT, intermediate standard, required. — Wimperis, Simpson & Fyffe, 61, South Molton Street, W.1. Mayfair 1277. [0201

ASSISTANT, preferably qualified, with some office experience for important work in London. Salary £700 - £1,000 according to age and experience.—Box No. 0896 c/o A. & B. N. [0202

QUALIFIED Assistant required for private office in West End. Some office experience an advantage, but not essential.—Box 0654, c/o A. & B. N. [0200

J. DOUGLAS MATHEWS & PARTNERS, Chartered Architects, 3, Ebury Street, London, S.W.1., require one Senior Assistant, one Medium Senior and one Junior, unqualified. Salaries in accordance with experience. [2169

ARCHITECTURAL Assistant required by West End office with varied practice. Not less than Inter. standard, and about three years' office experience. 5-day week. Bonus scheme.—Write Welch & Lander, 38 Gloucester Place, Portman Square, W.1. [2162

NORMAN & DAWBARN invite applications from architectural assistants of Inter. or higher standard. Interesting and varied programme of U.K. and overseas work. — Write to 5, Gower Street, London, W.C.1., or phone Langham 5341. [0094

R. J. BESWICK & Son, F.R.I.B.A., 10, Victoria Road, Swindon, Wiltshire, have vacancies for Architectural Assistants. Salaries according to qualifications and experience. — Apply in writing, or telephone Swindon 2857. [2120

SENIOR Assistant required in West End Office, very busy in interesting commercial work. Must be prepared to take responsibility. Please write giving details of experience, etc., to Box 0312, c/o A. & B. N. [0100

MINISTRY OF WORKS require Architectural Assistants, with 3 years' training, experience in architect's office and of Inter R.I.B.A. standard. Prospects of promotion and permanency. State salary required, and details of training and experience to Ministry of Works, WG.10 (H), Abell House, John Islip Street, S.W.1. [2003

ARCHITECTURAL Assistant required up to intermediate standard, Westminster Office. Pension and Bonus Scheme. 5-day week. — Write stating experience, age and salary required to Box No. 0114, c/o A. & B. N. [0083

ARCHITECT'S Co-partnership require unmarried qualified experienced assistant in their Lagos office. Maximum tour 14 months. Flat provided. — Write 44, Charlotte Street, London, W.1., or telephone Langham 5791. [0001

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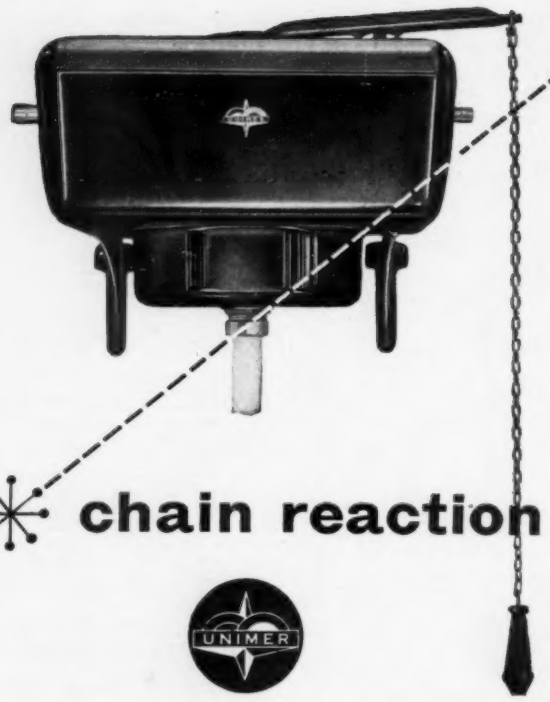

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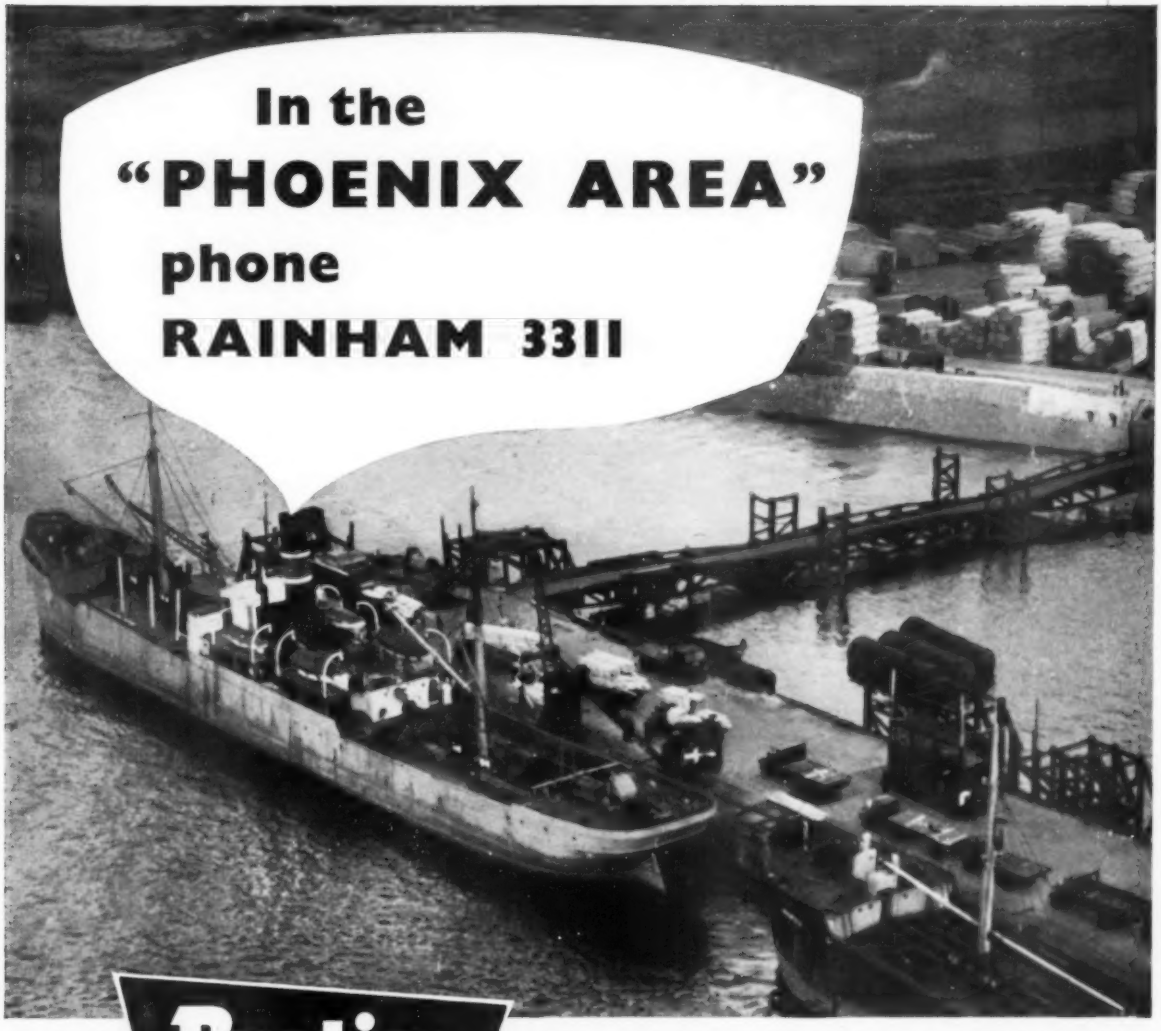

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